Ontario

Ontario Geological Survey
Open File Report 6184

Report of Activities, 2005 Resident Geologist Program

Kirkland Lake Regional Resident Geologist Report: Kirkland Lake District

2006

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ONTARIO GEOLOGICAL SURVEY

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Kirkland Lake Regional Resident Geologist Report:
Kirkland Lake District

by

G. Meyer, G.P.B. Grabowski, D.L. Guindon and E.C. Chaloux

2006

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Ontario

Ontario Geological Survey
Regional Resident Geologist Program

Kirkland Lake Regional Resident Geologist (Kirkland Lake District)—2005

by

G. Meyer, G.P.B. Grabowski, D.L. Guindon and E.C. Chaloux

2006

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Kirkland Lake Regional Resident Geologist—2005

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INTRODUCTION

The price of gold in 2005 ranged from a low of US$411.10 to a high of US$536.00 per ounce and the cumulative average was $US444.74, a rise of US$34.02 from the previous year (www.kitco.com).

Total gold production in 2005 from 2 producers in the Kirkland Lake Regional Resident Geologist District (Figure 1, Tables 2 and 9) was 3 774 491 grams of gold or 121 353 ounces of gold. This represents a decrease of 21% from 2004. Total historic gold production in the district is 41 670 737 ounces of gold recovered from 139 841 817 tons of ore plus 202 399 ounces of gold from 4 292 634 tons of tailings.

The 2 operating gold mines in the Kirkland Lake Resident Geologist District are the Holloway Mine, east of Matheson near the Quebec border, and the Macassa Mine in Kirkland Lake. Newmont Mining Corporation and Teddy Bear Valley Mines Limited own the Holloway Mine and Kirkland Lake Gold Inc., the Macassa Mine. Mining and milling operations at the 2 mines employed approximately 480 people.

Extender Minerals of Canada Ltd. operated an underground barite mining operation in North Williams Township.

Gold exploration was active at various sites in the Kirkland Lake Resident Geologist District. Kirkland Lake Gold Inc. was successful in discovering a new structure south of the Macassa Mine workings, and Queenston discovered new copper-gold mineralized zones and extended known gold zones at the Upper Beaver Mine.

The discovery of a large diamondiferous kimberlite pipe in the middle of the Round Lake batholith by Tres-Or Resources Ltd. and Arctic Star Diamond Corp. as well as another kimberlite discovery by Contact Diamond Corporation has sparked renewed interest in diamond exploration.

URSA Major Minerals Incorporated explored a known nickel-copper deposit near Shining Tree, and Pacific Comox Resources Ltd. tested the molybdenum-copper potential on the Ryan Lake property near Matachewan.

In 2005, there were at least 125 active exploration projects in the Kirkland Lake Regional Resident Geologist District (Tables 3 and 4).

At the end of 2005 there were 12 989 mining claims units totalling 40 500 units in the Kirkland Lake Resident Geologist District (*see* Table 1). Two hundred and forty two Assessment Work reports were incorporated into the Kirkland Lake Assessment File system (Table 3). These reports, approved for assessment credits, represent $8 575 417 in exploration expenditures and are a decrease of 19% over 2004. Sixty records of publications were added to the library database (Table 6).

LEGEND

Producing Mines
1. Extender Minerals of Canada Ltd. - North Williams Mine (barite)
2. Kirkland Lake Gold Inc. - Kirkland Lake Properties (gold)
3. Newmont Mining Corporation and Teddy Bear Valley Mines Limited - Holloway Mine

Advanced Exploration Projects
1. Apollo Gold Corporation - Black Fox Project (gold)
2. St Andrew Goldfields Limited - Taylor Project (gold)

Quarries
1. Kirkland Lake Rocks - Various Quarries (crushed stone)
2. Miller Minerals - Bucke Quarry (limestone)
3. A. Miron Topsoil Ltd. - Harley Quarry (crushed stone)

Mills
1. Extender Minerals of Canada Ltd. (barite)
2. Kirkland Lake Gold Inc. (Gold)
3. Newmont Mining Corporation (gold)
4. SMC (Canada) Ltd. (recycled precious metals)

Figure 1. Mining and milling in the Kirkland Lake District – 2005.

MINING ACTIVITY – PRECIOUS METALS

Canamet Resources Company – Canadaka Mill

Canamet Resources Company shipped 8100 t of silver-cobalt waste residue from the former Canadaka mill site in Coleman Township to a Chinese smelter as a cobalt feedstock. Another 7 000 to 10 000 t remain at the site.

The future plan is to bring some of the area silver mines and the former Canadaka mill back on line to produce an 8% cobalt concentrate for sale to the same Chinese smelter. The company has a potential long-term contract to supply this smelter (J. Reid, personal communication, 2006).

Kirkland Lake Gold Inc.

By April 30, 2005 (the end of the company's fiscal year), Kirkland Lake Gold Inc.'s production on its Kirkland Lake properties totalled 45 865 ounces of gold from 136 772 tons of ore, with a mill recovery grade of 0.335 ounces of gold per ton. Reserves at fiscal year end were: Proven - 1 149 608 tons at 0.43 ounce Au per ton (492 421 ounces) and Probable - 872 202 tons grading 0.50 ounce Au per ton (434 945 ounces). Resources were: Measured – 921 029 tons at 0.38 ounce Au per ton (348 703 ounces), Indicated – 1 029 319 tons at 0.36 ounce Au per ton (698 700 ounces) and Inferred - 731 558 tons grading 0.44 ounce Au per ton (321 478 ounces). Reserves were calculated based on the price of gold at C$516 per ounce.

An aggressive exploration program, which began in 2003, has identified at least 14 new ore-grade structures to the south of the previous workings, with strike lengths as great as 3000 feet indicated.

Major changes and enhancements during 2005 include development of a Safety and Training department to improve the company's safety performance and to formalize training programs, a vital component in today's labour market shortage; expansion of last year's program of increased underground mechanization; and the ongoing underground dewatering program reaching below the 5700-foot level, opening the way for a second loading pocket and access to stope mining on 3 additional levels already developed. These new areas access large reserves in ore blocks that can be operated using high productivity mining methods. Gold production for fiscal year 2006 is expected to rise to 90 000 ounces.

Employment varied throughout the year between 150 and 200 persons, plus various contractors on site. (www.klgold.com/, Mike Sutton, Kirkland Lake Gold Inc., personal communication, 2006)

Newmont Mining Corporation and Teddy Bear Valley Mines Limited – Holloway Mine

In 2005, the Holloway Mine in Holloway Township, produced 75 488 ounces of gold from 522 815 t of ore at a mill recovery rate of 92.7%.

Proven ore reserves at the mine as of December 31, 2005, were 44 263 t grading 5.996 g/t Au (8533 ounces). Probable reserves were 83 490 t grading 6.683 g/t Au (17 939 ounces). Resource estimates at the end of 2005 were: Measured – 298 271 t grading 6.932 g/t Au (66 471 ounces) and Indicated – 678 384 t grading 7.918 g/t Au (172 706 ounces).

During 2005, the joint venture partners completed 6300 m of drifting and 520 m of raising from shaft #2 (Holloway Mine) and 1800 m of drifting from shaft #3 (formerly Holt-McDermott Mine). Underground exploration diamond drilling, completed in 2005, was 24 208 m in 158 holes from Shaft #2 and 23 762 m in 111 holes from Shaft #3. Underground definition diamond drilling totalled 31 844 m in 442 holes from Shaft #2 and 20 010 m in 172 holes from Shaft #3. Surface exploration drilling totalled 5082 m in 23 holes.

Capital expenditures for the year amounted to $1 391 238 in Shaft #2 and $4 676 000 in Shaft #3. The proposed budget for 2005 for exploration drilling is $2 380 000; definition drilling is $5 211 638 and underground development $1 145 000.

At year-end, the mine employed 180 people (www.newmont.com/en ; Sylvain Picard, Newmont Mining Corporation, personal communication, 2006).

Polymet Resources Inc.

The Polymet plant in Cobalt is fully operational and has undergone repairs and further upgrades in the crushing/grinding circuit and in the drying circuit, but the plant is essentially under care and maintenance, ready for new business. Some limited processing work was conducted for Geomet Technologies, with the balance being internal processing during the course of the year. Four shipments of silver-gold concentrate were sent to Noranda's Horne Smelter in 2005. The Polymet Labs portion of the Polymet facility is fully operational and is currently conducting commercial assaying work, primarily for Kirkland Lake Gold Inc. The company is still pursuing hazardous goods permitting, in order to meet new Ministry of the Environment guidelines, that would permit them to handle precious and base metal-bearing slags, refinery sludge, dental waste, certain computer and electronic components and silver chloride by-products. The plant and operation received its ISO 9001:2000 Quality Management System certification July 2004. The company is still upgrading its environmental Certificate of Approval for acoustics and air smoke stack emissions, which is expected to be completed in 2005. The acoustics audit was completed in the spring of 2005. (G. Chitaroni, personal communication, 2006)

SMC (Canada) Ltd. – McAlpine Mill

SMC (Canada) Ltd., a subsidiary of Sabin Metal Corporation of East Hampton NY, operates the McAlpine Mill in Cobalt. The 200-ton per day plant is a gravity-flotation circuit and recovers gold, silver and the platinum group metals from slag, crucibles and refractory brick from Sabin's refineries. The company also engages in custom milling of non-acidic ore and is also looking at installing a kimberlite bulk sampling circuit. SMC (Canada) Ltd. employs 18 fulltime employees at the Coleman Township site. (D. Cleroux, SMC (Canada) Ltd, personal communication, 2006)

MINING ACTIVITY – INDUSTRIAL MINERALS

Extender Minerals of Canada Ltd. - Barite

Extender Minerals of Canada Ltd. maintained annual production of approximately 12 000 t barite ($BaSO_4$) in 2005. The mine in North Williams Township provided all ore that was processed at the Powell Township mill. Mining at the North Williams operation is conducted via decline ramp. The ore at this mine is exceptionally pure, grading 99% $BaSO_4$. Ore reserves at the North Williams Mine exceed 4 years and there are some reserves remaining at the Yarrow Mine. Some development work was done on the Langmuir Township barite property. The company employs 25 people on a year-round basis and the work force generally increases in summer (R. Hill, Extender Minerals of Canada Ltd., personal communication, 2006).

Kirkland Lake Rocks – Landscaping Stone

Kirkland Lake Rocks has 6 quarries near Kirkland Lake and the stone types include black, red, pink and white granite; green marble; white quartz and rose quartz. The company produces crushed stone for landscaping and architectural precast stone. Two train-car loads of green marble were shipped from a quarry in Gauthier Township. (R. Williams, personal communication, 2006).

Miller Minerals, a Division of Miller Group Inc. – Lime and Limestone Production Facility, Haileybury, Ontario

Production levels at Miller Minerals dropped to 30 000 t for 2005. A labour dispute at a high volume customer was the major contributor to this decline from the previous year. Agricultural Limestone is now recognized to be one of the best quality products in Ontario and Quebec. Sales of Aglime continued to increase for both farming and environmental applications. Hydrated lime deliveries in bulk and bulk bags continued to increase for waste and potable water applications. Growth in lime products is expected to continue over the next few years. (T. Overton, Miller Minerals, personal communication, 2006).

A. Miron Topsoil Ltd. – Harley Township Quarry, Thornloe, Ontario

A. Miron Topsoil Ltd., from Temiskaming Shores, Ontario, operated a limestone quarry in Harley Township. In 2005, product sales included 3 000 t of crushed ⅝ stone, 5 000 t of ¾ M gravel, 5 000 t of ⅞ A gravel, 8 000 t of mesabi screening and 10 000 t of blasted rock. The company also produces armour rock and pallets of limestone slabs for bricking houses. (Aurele Miron, personal communication, 2006).

ADVANCED EXPLORATION

Apollo Gold Corp.

Apollo Gold Corp. acquired the former Glimmer Gold Mine near Matheson in 2002 and renamed it the Black Fox project. The property is located in Hislop Township, 8 km east of Matheson. By the end of the second quarter of 2005, the company had completed 449 surface and 305 underground drill holes totalling 200 561 m. Proven and probable mineral reserves, calculated in 2003 for the proposed open pit portion of the Black Fox property, were 2 953 000 t grading 4.81 g/t Au.

Permitting and work on a feasibility study, based on a plan for a combined open and underground gold mine with an on site mill at a processing capacity of approximately 1500 t of ore per day, were in progress during the second quarter of 2005.

While exploring for gold, the company discovered a base metal zone in 2004. Diamond-drill hole 05BF406 intersected 1.889 ounces per ton Ag, 3.83% Pb and 12.53% Zn over 54.4 feet (www.apollogold.com).

St Andrew Goldfields Ltd.

St Andrew Goldfields Ltd. is pressing ahead with exploration and development at the Stock Gold Complex, 50 km east of Timmins. The project includes the Clavos gold deposit, the Stock Mine and the Taylor Mine.

The Clavos decline ramp reached a vertical depth of 250 m, and drifting on 3 levels is complete. Delineation diamond drilling, sampling, mapping and trial stoping continues. St Andrew's aim is to outline sufficient resources to support a 700 tonne/day mining operation.

St Andrew has an extensive delineation drilling, sampling and development program underway at the Stock Mine below the 8th level. The company hopes to begin mining again at a rate of 250 to 300 tonnes of ore daily in the second half of the 2005.

Permitting, engineering and planning for the development of the Taylor Mine project and the upgrade of the Stock mill to treat the additional ore are continuing. An advanced exploration program on the Taylor project is planned for the fourth quarter of 2005. The capacity of the mill will have to be increased to 2300 tonnes per day from 1300 tonnes per day to treat ore from the Taylor Mine.
(www.standrewgoldfields.com).

EXPLORATION ACTIVITY

Acrex Ventures Ltd., and Moneta Porcupine Mines Inc.

Acrex Ventures Ltd., in a 50% joint venture with Moneta Porcupine Mines Inc., is exploring an approximate 1035 ha portion of Moneta's Michaud property, 25 km east of Matheson. To date, 18 diamond-drill holes have been completed. Significant highlights of the last six-hole, 2142 m diamond-drilling program on the "55" Zone include, 11.23g/t Au over 1.70 m, 5.81g/t Au over 7.40 m, 10.90 g/t Au over 2.00 m, and 9.04g/t Au over 5.90 m. Acrex surrendered back to Moneta approximately 210 ha of the northeast portion of the Michaud Property. The surrendered portion of the original option contains the Southwest zone, on which work done in 1997 by Barrick Gold Corp. outlined an inferred gold resource. (*Acrex Ventures Ltd., press releases*, January 20, February 24 and May 17, 2005, www.acrexventures.com)

Contact Diamond Corporation

Contact Diamond Corporation discovered a new kimberlite pipe, named MR8, at its Timiskaming diamond project. The new pipe is located in Hudson Township, 6 km northeast of Contact Diamond's diamondiferous 95-2 pipe in Lundy Township. The discovery of MR8 comes at the beginning of a 15-target drilling campaign. Initial caustic fusion results from the newly discovered MR8 pipe returned no diamonds.

The company recently completed 18 diamond-drill holes totaling 2650 m on the previously discovered KL-01 kimberlite in Van Nostrand Township. Two distinct intrusive lobes, with at least 3 distinct kimberlite facies, including volcaniclastic kimberlite breccia (VKB) in a preserved crater facies, have been intersected. Kimberlite outcrop was exposed during road construction. Diamond drilling totaling 3960 m in 23 holes, was completed on the KL-22 kimberlite in Klock Township. The pipe also consists of 2 intrusive lobes with a dominant VKB lithology and later hypabyssal intrusive (HMK) phase. Both pipes have surface expressions of approximately 4 ha (KL-01) and 6 ha (KL-22).

In 2004, processing of core from the discovery holes on KL-01 and KL-22 yielded 27 diamonds from an 88 kg sample and 19 diamonds from an 85 kg sample, respectively. In 2005, a total of 469 kg of kimberlite was processed from the KL-01 pipe, collected from surface pits excavated upon the uppermost crater facies. The sample did not return significant diamond counts. A total of 652 kg of core, recovered predominantly from volcaniclastic kimberlite breccia (VKB) in the southern lobe of the KL-22 kimberlite pipe, returned 12 macro- and 67 micro- diamonds.

Aber Diamond Corporation performed an updated valuation of the 95-2 pipe mini-bulk sample for Contact Diamond. This new, unmodeled valuation is $46.50/carat for the complete sample of 64 carats, and $48.50/carat for the same subsample of 52 carats valued by WWW International Diamond Consultants in 2004.

Sudbury Contact increased its land position and added 49 000 ha by new staking centered on the community of Elk Lake. The company now has a total land package of 113 000 ha. (*Contact Diamond Corporation, press releases*, March 7, May 26 and December 05 and 14, 2005, www.contactdiamond.com)

GLR Resources Inc.

GLR Resources Inc. completed 8 diamond-drill holes on its Hurd/McAuley Property in Teck Township. The drilling program was designed to test for the down-dip, common boundary area mineralization drill tested by Kirkland Lake Gold Inc., as well as additional parallel north-oriented structures within the property. Highlights include 0.9 g/t gold over a core length of 2.1 m in drill hole 4, 2.3 g/t gold over a core length of 2.0 m in drill hole 5 and 2.6 g/t Au over 2 m intersected in hole 8. (*GLR Resources Inc., press release*, February 28 and April, 2005 www.glrresources.com)

Golden Valley Mines Ltd.

Golden Valley Mines Ltd. completed 6 diamond-drill holes totaling 632 m on the Winnie Lake property in Teck Township, near Kirkland Lake. The drilling program was designed to test Induced Polarization (IP) anomalies and a

time-domain electromagnetic (TDEM) anomaly located 1.4 km west of the historic "Shaft Zone". Assay highlights include 0.76% Zn, 2.59% Pb and 1.59 g/t Ag over 2.16 m, including 0.82 m that assayed 1.96% Zn, 4.73% Pb and 2.94g/t Ag. (*Golden Valley Mines Ltd., press release,* June 3, 2005, www.goldenvalleymines.com)

Goldeye Explorations Limited

Goldeye Explorations Limited intersected 218 g/t Au over a core length of 2.05 m in diamond-drill hole G-05-22 on the Big Dome Zone in Tyrrell Township, west of Gowganda. In addition, a new zone was discovered in the same hole, grading 0.27 g/t Au over 33.8 m. Diamond drill-hole G-05-23, a follow-up hole, intersected a 2.09 m interval grading 47 g/t Au, 165 m directly below the previous hole. The 47 g/t Au assay was further checked by a screened metallic assay method giving a more representative result. The gold content was increased to 80.7 g/t over 2.09 m. (*Goldeye Explorations Limited, press releases,* November 14 and December 09 and 19, 2005, www.pathcom.com/~goldeye/)

Goldstake Explorations Inc.

Goldstake Explorations Inc. completed an 11-hole diamond-drilling program in McGarry Township, east of Kirkland Lake. Nine holes tested gold targets and highlights include 1078.97 g/t Au over 0.19 m or 33.29 g/t Au over 8.76 m in hole DDH 11, 127.02 g/t Au over 0.79 m or 29.14 g/t Au over 3.48 m in hole DDH 10 and 212.52 g/t Au over 0.39 m or 28.66 g/t Au over 3.0 m in hole DDH 9. (*Goldstake Explorations Inc., press releases,* April 21 and June 07, 2005, www.goldstake.com)

Harte Gold Corp.

Harte Gold Corp. released the results of its latest 2005 deep diamond-drilling program carried out on its Stoughton–Porcupine property. The property adjoins Newmont Mining Corporation's Holloway and Holt-McDermott gold mine properties and is located in Stoughton and Marriott townships. Five drill holes totaling 4181 m were completed. The deep-drilling program was designed to test the continuity of gold mineralization at depth. The best intersections were 3.74 g/t Au over a core length of 8.0 m and 1.97 g/t Au over 7.0 m. (*Harte Gold Corp. press releases,* August 09 and November 23, 2005, www.hartegold.ca)

Pacific Comox Resources Ltd.

Pacific Comox Resources Ltd. completed a diamond-drilling program of 12 holes totaling 1089 m in the immediate vicinity of a small open pit on its Ryan Lake property near Matachewan. Assays are pending. This drilling is a follow-up program to more fully delineate a molybdenum-copper mineralized zone intersected in 2 diamond-drill holes during the summer of 2005. The 5 diamond-drill holes were drilled from one setup on the floor of the open pit. The 2 holes returned the following results:

Hole PC-05-06 returned an intersection of 149 feet, from 3 feet grading 0.060% molybdenum (1.3 lbs/t) and 0.04% copper (0.9 lbs/t). The hole ended in mineralization.

Hole PC-05-07 returned an intersection of 105 feet from, 25 feet grading 0.079% molybdenum (1.7 lbs/t) and 0.08% copper (1.7 lbs/t). The hole intersected weakly mineralized andesite at 130 feet (*Pacific Comox Resources Ltd., press release,* September 21 and December 06, 2005, www.pacificcomox.com)

Queenston Mining Inc. – Upper Beaver Mine

Queenston Mining Inc. carried out exploration projects totaling approximately $3.0 million on its property holdings in the Kirkland Lake area. Diamond-drilling programs were carried out at the Upper Beaver, Princeton, Kirkland Lake West and Amalgamated properties. The best results were obtained at the Upper Beaver Property, located approximately 20 km east of Kirkland Lake in Gauthier Township. Drill hole UB05-16 intersected a number of significant gold zones, including a new deep discovery assaying 12.5 g/t Au with 1.1% Cu over a core length of 23.6 m in porphyry-syenite. To date, the drilling has intersected 7 gold mineralized zones, some of which contain

appreciable amounts of copper. Two of the mineralized zones are new discoveries. To highlight the exceptional results, a summary of some of the best intersections follows:

Central Zone	DDH UB05-16 - 4.8 m at 29.2 g/t Au
Upper Contact Zone N of Mine Workings	DDH UB05-16 - 9.3 m at 2.6 g/t Au
Upper Contact Zone N of Mine Workings	DDH UB05-21 - 5.6 m at 8.9 g/t Au
Upper Contact Zone N of Mine Workings	DDH UB05-23 - 5.6 m at 15.8 g/t Au
Upper Contact Zone N of Mine Workings	DDH UB05-21 - 2.1 m at 10.5 g/t Au
Upper Contact Zone S of Mine Workings	DDH UB05-03 - 3.0 m at 14.3 g/t Au, 0.2% Cu
Upper Contact Zone S of Mine Workings	DDH UB05-17 - 10.9 m at 5.0 g/t Au
Upper Contact Zone S of Mine Workings	DDH UB05-19 - 4.2 m at 13.4 g/t Au, 0.7% Cu
Lower Contact Zone N of Mine Workings	DDH UB05-16 - 5.7 m at 8.4 g/t Au
Lower Contact Zone S of Mine Workings	DDH UB05-04 - 9.0 m at 4.6 g/t Au, 0.1% Cu
Porphyry Zone (new)	DDH UB05-16 - 23.6 m at 12.5 g/t Au, 1.1% Cu
Porphyry Zone (new)	DDH UB05-21 - 4.8 m at 8.1 g/t Au, 2.4% Cu
Porphyry Zone (new)	DDH UB05-23 - 1.7 m at 25.8 g/t Au
Porphyry Zone (new)	DDH UB05-24 - 6.7 m at 8.7 g/t Au
Lower Gauthier Zone (new)	DDH UB05-21 - 0.7 m at 50.1 g/t Au, 2.5% Cu

The Contact zones have now been traced over a length of 600 m and continue to remain open. (*Queenston Mining Inc. press releases,* May 10, July 27, November 10, December 13, and 2nd Quarter Report dated June 30, 2005, www.queenston.ca)

Queenston Mining Inc. – Princeton Property

On the Princeton property, Gauthier Township, deep follow-up drilling to an earlier hole (PR04-11, which intersected 30.6 g/t Au over 1.0 m) encountered a zone of mineralized syenite. The zone assayed 0.6 g/t Au over 16.0 m and 0.5 g/t Au over 17.0 m in holes PR05-10 and -10B, respectively, and a graphite zone in hole PR05-11A assaying 6.7 g/t over 1.0 m. (*Queenston Mining Inc., press releases,* January 10, and 2nd Quarter Report dated June 30, 2005, www.queenston.ca)

Queenston Mining Inc. – Amalgamated Kirkland Property

Diamond drilling continued on Queenston's Amalgamated Kirkland property, located south of and adjacent to Kirkland Lake Gold's Macassa property. A fence of holes was drilled from east to west across the northern boundary of the Amalgamated Kirkland property. The first hole in the program intersected a gold zone assaying 0.61 g/t Au over a core length of 9.8 m. (*Queenston Mining Inc., press releases*, January 10, May 10, and 2nd Quarter Report dated June 30, 2005, www.queenston.ca)

Queenston Mining Inc. – Kirkland Lake West Property

Following a deep IP geophysical survey on the Kirkland Lake West property, west of the Macassa Gold Mine, Queenston completed a seven-hole, 3555 m diamond-drilling program testing both east- and north-trending targets. The most significant results were recorded in hole KW05-06 where 3 breaks were intersected in sediments containing low gold values including 1.1 g/t Au over 1.4 m, 3.1 g/t Au over 0.6 m and 0.9 g/t Au over 1.4 m at 500 m below surface. (Queenston Mining Inc., 2nd Quarter Report dated June 30, 2005, www.queenston.ca)

Sage Gold Inc.

Sage Gold Inc. completed a seven-hole diamond-drilling program west of Lake Abitibi in Kerrs Township. Two holes intersected 2 significant gold mineralized zones. Drill hole K-05-01 intersected 1.86 m grading 9.18 g/t Au and 2.97 m grading 7.36 g/t Au. Drill hole K-05-07 intersected 3.3 m grading 5.73 g/t Au and 3.5 m grading 2.83 g/t Au. (www.sagegoldinc.com)

Temex Resources Corp. – Juby Gold Project

Temex Resources Corp. reported that independent consulting firm GeoVector Management Inc. completed an updated resource estimate for the Juby Main Zone, within the wholly owned Juby Lease Gold Project in Tyrrell Township, approximately 100 km southwest of Kirkland Lake. Two mineralized zones constitute the Juby Main Zone: a higher grade Core Zone, which has an associated lower grade halo, and an Upper Porphyry Zone, which is in the hanging wall of the higher-grade zone. Drill-indicated resource tonnages and grades for the Core and Upper Porphyry zones are 4 460 000 t grading 2.2 g/t Au (315 000 ounces of gold). The total Inferred resource tonnage and grade for the Core Zone, Gold Halo and Upper Porphyry is 1 840 000 t grading 2.03 g/t Au at a cut-off grade of 1.5 g/t Au. (120 000 ounces of gold) (*Temex Resources Corp., press release*, February 16, 2005, www.temexcorp.com)

Temex Resources Corp. – Wilson Lake Diamond Project

Temex Resources Corp. identified a diamond in a sample of till collected from the Wilson Lake Diamond project near Temagami. A total of 219 till samples, weighing approximately 10 kg each, were collected during the summer and fall of 2004 from 2 claim groups separated by approximately 20 km. Electron microprobe analyses and grain descriptions were completed. Results indicate that 8 spatially distinct kimberlite indicator mineral (KIMs) dispersal trains are present. (*Temex Resources Corp. press releases*, January 17 and June 07, 2005, www.temexcorp.com)

Temex Resources Corp. – Brett Property

Temex Resources Corp. completed a first-phase diamond-drilling program on the Brett property, located 15 km south of Latchford. The drill program consisted of 16 holes totaling 2561 m and was designed to test for the bedrock source of high-grade gold mineralization discovered in a float boulder by a Temex prospecting crew in late November, 2003. No significant gold assays were returned from the current phase of drilling; however, it is noteworthy that 4 holes drilled in one orientation did consistently intersect a series of carbonate veinlets, which may be related to the discovery boulder. A gabbro unit intersected in hole BR-04-01 yielded a broad zone of anomalous copper and nickel values with up to 0.28% nickel and 0.16% copper over 7.40 m including a 1.40 m section, which yielded 0.72% nickel, 0.19% copper and 0.357 g/t platinum plus palladium. (*Temex Resources Corp. press release*, January 26, 2005, www.temexcorp.com)

Tres-Or Resources Ltd.

Tres-Or Resources Ltd. reported the recovery of a diamond in till from a sample collected near the southern (down-ice) part of its 100%-owned Temagami diamond project. The diamond was recovered from one of 37 follow-up till samples weighing approximately 25 kg each. The sampling was intended to provide further information on the diamond potential of the highest priority indicator mineral train on the property. A large number of additional KIMs, including Cr-pyropes, Cr-diopsides, forsterite olivine, Mg-ilmenite and chromite, were also reported from these samples. (*Tres-Or Resources Ltd., press release*, January 31, 2005, www.tres-or.com)

Tres-Or Resources Ltd. and Arctic Star Diamond Corp.

Tres-Or Resources Ltd. and Arctic Star Diamond Corp. discovered a kimberlite pipe, referred to as the Lapointe, in the northeast corner of Sharpe Township, 28 km south-southwest of Kirkland Lake. Follow-up of an airborne magnetic survey over the Round Lake batholith area, flown as part of the Discover Abitibi Initiative, resulted in the discovery. The Lapointe is a large coincident magnetic, electromagnetic, and indicator mineral target that appears to consist of 2 coalescing lobes. The magnetic anomaly covers 20 ha at the surface. Till samples collected 200 to 1200 m down-ice of the Lapointe kimberlite pipe returned high counts of kimberlite indicator minerals. To date, a total of 588.5 kg of kimberlite were processed by caustic fusion analysis and 31 diamonds have been recovered. The largest diamond is 0.0665 carats. A 3500 m drilling program is underway to delineate the Lapointe kimberlite pipe. (*Tres-Or Resources Ltd. and Arctic Star Diamond Corp., press releases*, May 12 and 19, June 8 and August 19, 2005, www.tres-or.com and www.arcticstardiamond.com)

URSA Major Minerals Incorporated

URSA Major Minerals Incorporated signed an option agreement to acquire a 100% interest in a nickel-copper deposit in Fawcett Township near Shining Tree. Eight diamond-drill holes were completed and all intersected nickel-copper mineralization. Highlights from the program include hole U12-05, which returned grades of 0.98% Ni and 0.48% Cu over 39.44 m, and hole U12-04, which returned grades of 1.04% Ni and 0.52% Cu over 20.35 m. Several higher-grade intersections (over 1.5% Ni) were reported, including drill hole U12-06, which returned 2.19% Ni and 0.88% Cu over 2.45 m. The 8 NQ size holes (total length 976 m) were drilled to confirm the grade distribution and geometry of the near-surface portion of the deposit to a depth of 110 m below surface, over a strike length of 100 m. The deposit remains open along strike and at depth. The host rock for the base metal mineralization is sulphide-rich gabbroic breccia contained within anorthositic gabbro. All of the holes intersected the mineralized breccia and all of the breccia was sampled and assayed. (*URSA Major Minerals Incorporated, press release*, December 06, 2005, www.ursamajorminerals.com)

RESIDENT GEOLOGIST STAFF AND ACTIVITIES

At year-end, staff at the Kirkland Lake Regional Resident Geologist office consisted of G. Meyer, Regional Resident Geologist, G. Grabowski, District Geologist, D. Guindon, District Geologist and E. Chaloux, District Support Geologist. S. Gadoury, Experience student, provided client service support and assistance to all staff during the summer months.

G. Meyer gave an overview on mining and exploration activities in northeast Ontario at the Ontario Exploration and Geoscience Symposium in Toronto in December and at the Northern Prospectors Association annual general meeting in Kirkland Lake and participated at a Targeted Geoscience Initiative meeting in Rouyn-Noranda.

G. Grabowski operated a field office in Cobalt for 4 days per month during the field season, from May to October. He also completed a Discover Abitibi Initiative project, which established that lamprophyre dikes have significant potential to host diamonds. Results from the project were published in Ontario Geological Survey Open File Report 6170.

D. Guindon participated on a committee studying enhancements to the MDI database application and was seconded by the Sedimentary Geosciences Section of the Ontario Geological Survey to complete a project on "Regional Modern Alluvium Sampling Survey of the Kirkland Lake–Matachewan Region, Northeastern Ontario" based on data previously collected by Janet Reid. Results from the project were published in Ontario Geological Survey Open File Report 6124.

E. Chaloux attended 2 mineral exploration-related courses and completed a project titled "The Croxall Breccia Pipe: Geological and Geochemical Study of an Archean Porphyry Cu-Mo-Au System" as part of his MSc requirements at Laurentian University.

Kirkland Lake RGO staff contributed material for the Northeastern Ontario's Regional Resident Geologist program display for the PDAC Convention in Toronto, the Northeastern Ontario Mines and Minerals Symposium in Timmins, Quebec Exploration 2005 in Quebec City and the Ontario Exploration and Geoscience Symposium in Toronto.

Kirkland Lake RGO staff conducted 4 field trips in the Kirkland Lake area. Information sessions were provided for École Secondaire Jean-Vanier and Kirkland Lake Collegiate and Vocational School students.

Exploration activities in the Kirkland Lake Regional Resident Geologist district were up for the fourth consecutive year. Please refer to Table 8 for a summary of the year 2005 activities.

PROPERTY EXAMINATIONS

Allsopp Prospect – Former Harrington Prospect

The A. Allsopp property is located in the northeast corner of Eby Township, approximately 10 km southwest of Kirkland Lake. The property consists of 12 leased claims, 11 with mining rights only and one with surface and mining rights.

Overburden stripping at location NAD83 Zone 17 562991E / 5325585N exposed a chalcopyrite vein system up to 1 m wide. At the southern contact of this vein system, chalcopyrite is locally concentrated in a band up to 10 cm wide that grades up to 12.13% Cu (A. Allsopp, personal communication, 2005). The mineralized zone strikes 060°, has a near vertical dip and is hosted within carbonatized mafic volcanic rock that is exposed over a 25 m width. Chalcopyrite is also exposed in another overburden-stripped area to the east at NAD83 Zone 17 563080E / 5325607N. A syenite intrusion is exposed at the northern side of both stripped areas.

The overburden stripping was intended to follow up on high-grade drill intersections that Todora Syndicate reported in 1948 (Huston 2000). Nothing at surface appears to support the reported drill results, and it was already suggested by N.E. Nelson in 1948 that the drill results were likely fraudulent (Huston 2000). This issue has perhaps overshadowed the potential that may exist along strike and at depth of a major alteration zone with associated IP anomalies along the Eby–Otto fault, both on the property and to the west of it. This fault zone is located 1.5 km south of the Cadillac–Larder Lake deformation zone.

Sharpley (1999) describes the mineralization and alteration on the property as follows:

> A major zone consisting of iron carbonate, silicification and pyritization occurs over a strike length of 1000 m and a width of 200 m on the Allsopp-Huston Property along the Eby-Otto fault, which is a subsidiary of the Cadillac-Larder Lake Break within the Larder Lake Group of tholeiitic volcanics. A zone of silicified breccia occurs within the envelop of alteration with disseminated pyrite over a strike length of 600 m and over a width of 50 m. Geochemically anomalous values occur in and around the alteration zone ranging up to 1851 ppb (Au). Moderate to strong induced polarization (chargeability) anomalies occur within the alteration zone over a strike length of 800 m and a width of 100 m.

Silicified, carbonatized and chloritized rock, probably altered mafic volcanic rock, occurs on the access road to the overburden stripped areas at NAD83 Zone 17 562856E / 5325623N. The rock has undergone micro-fracturing with specularite? fracture filling and contains up to 15% pyrite. This rock unit is perhaps similar to the silicified breccia described by Sharpley (1999). A similar rock also occurs, probably on strike, 1.45 km to the west-northwest in an outcrop on the western side of Hwy 11 at approximately NAD83 Zone 17 561455E / 5325782N.

If the mineralized and hydrothermally altered sites are part of a continuous zone then the strike length could exceed more than 2.0 km. Although the gold content associated with this large mineralized alteration zone is generally low, sporadic gold values ranging up to 1851 ppb make it a very attractive target for further exploration. A number of gold deposits in the Kirkland Lake Resident Geologist District such as the Lightning Zone at the Holloway Mine, "flow ore" at the Kerr Mine and the "D" zone at the Cheminis Mine do not come to surface. In the plane and above these orebodies/deposits there is ample evidence at surface for their existence in the form of carbonatization, silicification, pyrite mineralization and minor, sporadic gold mineralization. The best potential for mineralization along this alteration zone should be determined by an IP survey measuring to a depth of 400 m as suggested by Sharpley (1999). Deep drilling should then follow up on the most favourable IP defined targets to ultimately test to a depth of 400 m below surface and possibly beyond.

Bannockburn Township Nickel-Copper Occurrences

Several properties containing nickel-copper mineralization are located in west-central Bannockburn Township, approximately 27 km west of Matachewan. The occurrences include the Thalweg Zone, the Bannockburn–Rahn Lake Zone, and the C-Zone. Access is via Hwy 566 west from Matatchewan. The C-Zone is about 5 km south of the highway.

Exploration began in the area prior to 1920 with interest in gold and asbestos. A limited amount of asbestos was mined from the Rahn Lake deposit in the late 1930s. The area saw another period of asbestos exploration in the late 1960s and early 1970s. Drilling during this period identified disseminated sulphide in olivine cumulate rocks, though it appears none of the core was assayed for base metals. Between 1995 and 1999, Outokumpu Mines systematically staked and explored the property and discovered *2 Kambalda-style and one Mount Keith-style* mineralized zones. Mustang Minerals Corp. acquired the properties from Outokumpu Mines in 2003.

The property consists of a complex sequence of calc-alkalic intermediate to felsic volcanic rocks, mafic volcanic rocks, komatiitic basalt to dunite, silicate to sulphide iron formation, gabbro intrusions, and a series of sedimentary rocks (Lapierre 2003; Brereton 2003). Houlé, Préfontaine and Berger (2005) describe the ultramafic geology as follows:

> In the following section, the map area is divided into three blocks based on geological context (map patterns) and major breaks: the Montrose–Bannockburn Block, the Powell Block, and the Cairo Block. The Montrose–Bannockburn Block corresponds to the area located west of the Mistinikon Lake fault. The Powell Block corresponds to the area located between the Mistinikon Lake fault and the Montreal River fault. The Cairo Block corresponds to the area located east of the Montreal River fault. Komatiitic rocks occur in different proportions in each of these blocks.
>
> Komatiitic rocks are relatively abundant in the Montrose–Bannockburn Block and are composed of up to 4% of the supracrustal rocks. All komatiitic rock outcrops in this block are distributed over eleven komatiite occurrences. Only three komatiite occurrences possess enough exposure to evaluate their textural facies variations. These komatiite occurrences correspond, respectively, to the Thalweg Zone, the Bannockburn–Rahn Lake Zone, and the C-Zone. Overall, the komatiitic rocks in this sector exhibit several different textural facies such as massive (aphyric and cumulate), spinifex texture, flow breccia, and polysutured jointing. In the Montrose–Bannockburn Block, massive cumulate komatiite and lesser massive aphyric komatiite are the dominant textural facies that occur throughout the area.

The C-Zone was visited during the summer of 2005. This zone was discovered by overburden stripping over an EM conductor. The zone trends about 070° and dips steeply to the south and appears to face south. It appears discordant to the surrounding geology (Houlé, Préfontaine and Berger 2005). In section, the mineralized zone is underlain by dacite, which is overlain by up to 8 m of massive and disseminated to blebby sulphides. This, in turn, is overlain by about 15 m of brecciated komatiite, followed by dacite.

Diamond drilling by Mustang Minerals Corp. determined that the zone plunges to the east. It was intersected over a strike length of about 225 m and to a vertical depth of about 225 m. Surface samples ranged up to 4.85% Ni and drill results up to 3.25% Ni. Most of the drill intersects were around 1.5 m in width. (see "CZone/C-Offset Long Section" figure by following the "Bannockburn Nickel Project" link at http://www.mustangminerals.com/pages/plat_properties.html).

Komatiite-associated nickel deposits tend to occur in clusters, and with the associated geology, there is good potential for finding more deposits in the Bannockburn Township area. An examination of logs from diamond-drill holes completed in search of asbestos may be fruitful in identifying areas containing sulphide mineralization worthy of follow-up.

Ireland Gold Showing

Archie Lacarte carried out overburden stripping in 2005 east of and next to the road to the North Williams Township Barite Mine. The stripped area is located on mining claim 3008940 at NAD83 Zone 17 496670E / 5253947N.

At the time of a property visit, most of the stripped area was flooded. According to Mr. Lacarte, several massive, flat pyrite blobs measuring up to 120 x 60 x 35 cm were exposed. Several smaller similar blobs were observed above the water level. These, along with several quartz pebble conglomerate beds, occur in the Lorrain Formation of the Huronian Supergroup. Some of the smaller pyrite blobs are close to quartz pebble conglomerate beds and one was observed to become part of a conglomerate bed. In this instance the pyrite becomes semi-massive and forms part of the matrix to the quartz pebbles. Due to the close relationship of the quartz pebbles and the pyrite blobs, it can be

assumed that the same mechanical water-washing process that concentrated quartz pebbles into beds, concentrated the pyrite.

Two quartz pebble conglomerate beds, each approximately 30 cm thick and separated by a 30 cm thick quartzite with occasional quartz pebbles, were also exposed. The quartz pebbles are rounded, well sorted, clast supported and constitute approximately 50 to 60% of the rock. The pebbles range in size from 0.5 to 1.5 cm in diameter. The pyrite content varies considerably for the various quartz pebble conglomerate beds and also varies substantially along the strike of individual beds.

Falconbridge Ltd. previously completed 6 short, vertical diamond-drill holes south of and to the southwest of the stripped area. Diamond-drill hole NW31-03, located approximately 650 m to the southwest of the stripped area, intersected 1.84 m grading 1375 ppb Au (Kirkland Lake Assessment File CO-1717).

NFX Gold Inc. – Cheminis Project

NFX Gold Inc.'s Cheminis project consists of 6 properties located in McVittie and McGarry townships. These are, from west to east, the Swansea, Fernland, Cheminis, Cheminis North, Bear Lake and Barber Larder properties. Three of the properties, the Cheminis, Bear Lake and Barber Larder, were visited in 2005.

The Cheminis and Barber Larder ore bodies are on the same structure as the past-producing Kerr Mine, which produced nearly 11 million ounces of gold. The setting of the deposits are also very similar in that they are within and proximal to the Cadillac–Larder Lake deformation zone.

Three distinct mineralization types are found on the Cheminis project:

1. "Flow type" gold mineralization – high content of disseminated pyrite in mafic tuff or flow units
2. "Carbonate type" gold mineralization – stockwork quartz veining in altered ultramafic rocks ("green carbonate")
3. "Sedimentary type" gold mineralization – disseminated pyrite.

The first 2 types of gold mineralization were the main ore types at the Kerr Mine.

Southwest of the Cheminis shaft, 2 shafts occur at NAD83 Zone 17 599122E / 5330116N and NAD83 Zone 17 599166E / 5330124N. Amalgamated Larder Mines Ltd. sank one of them to a depth of 275 feet. These shafts are located where white quartz veins are exposed by pits and trenching. Between the shafts and the Cheminis shaft, previous deep diamond drilling intersected encouraging gold mineralization at a depth of 400 to 600 m below surface. These intersections were made at a time when the gold price was in decline and follow-up diamond drilling was not performed (Les Tihor, personal communication, 2005).

Of the 6 properties, the Cheminis Mine property was historically the most extensively explored. From 1991 to 1996 the mine produced 17 530 ounces of gold from 179 013 tons of ore. Prior to the implementation of National Instrument 43-101 (NI 43-101) in 2001, estimated resources at the Cheminis Mine were 2.9 million tons averaging 0.17 ounce per ton gold (Canadian and American Mines Handbook, 2005–2006). The largest of the Cheminis deposits is the D Zone, which does not come to surface. The "A" Zone (flow ore) comes to surface to the northeast of the Cheminis shaft at NAD83 Zone 17 599471E / 5330307N.

Further to the east, in the general vicinity of NAD83 Zone 17 600037E / 5330435N, a large outcrop has been stripped. At the north of the outcrop area, a highly sheared, deformed (strong S_2 deformation and minor S_3 deformation), and hydrothermally altered, banded rock is exposed. The rock appears strongly silicified along parallel selected planes of the main deformation zone. Further deformation took place to break up the "silicified narrow beds into aligned fragments. The material between the silicified fragments is probably altered mafic volcanic material. Another perhaps less likely explanation is that the silicified narrow bands represent stretched pebbles (?). A green carbonate rock unit occurs over a large area to the south. Polyhedral jointing is displayed by this unit, which has been extensively brecciated. This rock type is similar to an outcrop on Hwy 66 just southwest of the Cheminis shaft. At the southern extremity of the large outcrop area, highly folded sediments occur.

On the Bear Lake property a banded, siliceous, apparently fragmental rock, similar to the one described above, was intersected in diamond-drill hole NFX 16-04. This hole is collared at NAD83 Zone 17 600495E / 5330253N, approximately 470 m east-southeast of the large stripped outcrop area. "Flow ore" type mineralization was also intersected in this hole. This diamond-drill hole stopped in mineralization and should be deepened.

East of the Barber Larder open pit, numerous diamond-drill holes intersected a gold mineralized zone on strike with the mined Barber Larder orebody. This is also the site where Maximus Ventures Ltd. completed its first diamond-drilling program at the end of 2005. The company has the right to acquire a 60% joint venture interest in NFX's interest in the Larder Lake property. In 1988, 3072 ounces of gold were recovered from 30 118 tons of ore from the Barber Larder pit. Pre NI 43-101 diamond-drill-defined resources at the mine site were 60 000 tons of 0.16 ounce per ton gold.

An old trench was visited close to the eastern boundary of the Barber Larder property at NAD83 Zone 17 604078E / 5331505N. The trench extends for 30 m along an azimuth of 334°. A boulder of silicified and carbonatized material, well mineralized with disseminated and stringer pyrite, assayed 0.1 ounce per ton gold (05-GM-40).

The presence of extensive, intensely hydrothermally altered rock on the 3 properties is very impressive. "Flow ore" at the Kerr Mine did not outcrop and the green carbonate orebody nearly topped out at surface. Perhaps, like at the Kerr Mine, some gold deposits yet to be found within the Cheminis project area do not come to surface. In some instances the strong hydrothermal alteration zones at surface may indicate their presence at depth. A total of more than 500 diamond-drill holes have been completed on the properties (Don Lavigne, personal communication, 2005) with high density drilling in the vicinity of known gold orebodies. International Goldfields Ltd. created a GIS database using MapInfo software. This should aid significantly in defining drill targets; however, there appears to be a lack of IP surveys on the properties. Since gold is mainly associated with disseminated pyrite, such surveys should be performed where outcrop is scarce and drilling density is low.

Dyment, L.M. – Potterdoal Copper-Zinc Prospect

L.M. Dyment holds 6 contiguous claims (7 units) in Munro and Warden townships. Included within the group, on claim L.1242759 is the Potterdoal copper-zinc prospect (NTS: 42A/09SE; UTM: NAD83 Zone 17 558047E, 5385560N; MDI:42A09SE00013). Previous geological studies by Arndt (1977), Epp (1997), Johnstone (1991) and Péloquin, Houlé and Gibson (2005) provide excellent descriptions of the volcanic stratigraphy and mineralization in the Potterdoal area. The improved understanding of the volcanic stratigraphy in the Abitibi greenstone belt has resulted in changes to assemblages in the area (Ayer et al. 2005). The following description of the property is based on these reports.

The property is located about 39 km east of Matheson, about 8 km along the Hedman Mine access road leading north from Hwy 101. The Potter Mine is located about 2 km to the south. P. Doal made the discovery of the original surface showing in 1926. In 1927, a 28 tonne bulk sample returned grades of 15.22% copper, 4.15% zinc, 2.70 ounce per ton silver and 0.045 ounce per ton gold. Between 1928 and 1930, 2577 short tons of high-grade ore (11% Cu) was mined. No subsequent work on the property was reported until 1979, when Amax Minerals Exploration remapped, performed various surface geophysical surveys and diamond drilled with limited success. In 1991, Granges Inc. re-examined the property, with more geophysics and drilling, resulting in the discovery of a high-grade sulphide lens. The property has been idle since 1994.

The Potterdoal massive sulphide lens, which lies along the north limb of the McCool Syncline, is hosted in a tholeiitic-komatiitic succession belonging to the Upper Kidd–Munro assemblage (Ayer et al. 2005). In Munro Township, the Upper Kidd–Munro assemblage is in fault contact with younger turbiditic sedimentary rocks of the Porcupine Assemblage to the south. Tholeiitic basalt flows are the dominant rock type, including pillowed to massive flows from 1 to 20 m thick, interlayered with thicker flows up to 120 m thick (Johnstone 1991). Thicker komatiitic flows typically show polygonal jointing, whereas thinner flows locally exhibit flow-top spinifex textures (Arndt 1977). Minor amounts of interflow cherts and crystal tuff occur at irregular intervals within the stratigraphy and rarely reach thicknesses greater than 3 to 4 m. A thick (800 to 1400 m) differentiated synvolcanic-tholeiitic sill (Munro–Warden sill) lies to the north of the Potterdoal shaft. The sill was emplaced at very shallow depths and probably breached the sea floor, forming an extensive breccia cap (Epp 1997).

Two styles of sulphide mineralization are observed at the Potterdoal deposit, an upper massive sulphide lens and underlying stockwork mineralization. The main sulphide lens occurs along the top of a tectonic breccia, which fills a fault scarp depression. The stockwork mineralization is confined to narrow fault breccia zones and joint structures within the gabbroic portion of the host tholeiitic flow. Chloritic alteration accompanies this stockwork mineralization. The sulphide mineralogy is similar in both ore types and consists of pyrrhotite, chalcopyrite, sphalerite and pyrite in decreasing order of abundance (Epp 1997).

Drilling by Millstream Mines Ltd. between 1997 and 1999 at the Potter Mine confirmed continuation of base metal mineralization along strike and down dip to a depth of over 1000 m below the old workings. Similarities between the Potter Mine and the Potterdoal deposit are well documented by Epp (1997) and Péloquin, Houlé and Gibson (2005). The previous drilling on the property by Amax and Granges were drilled using different grids, making the geometry of the deposit potentially larger (M. Dyment, personal communication, 2005). A re-compilation of the drill holes, using modern GIS technology, prior to any further exploration is recommended.

RECOMMENDATIONS FOR EXPLORATIONS

Diamond-Bearing Lamprophyre in the Kirkland Lake–Cobalt Area

The Discover Abitibi lamprophyre sampling project, described elsewhere in this report, has demonstrated that lamprophyre dikes and breccias in the Kirkland Lake–Cobalt area contain diamonds. The conclusions reported in OFR 6170 (Grabowski and Wilson 2005) were:

- A 25 kg sample represents about one cubic foot of rock. Although every attempt was made to collect as representative a sample as possible from each exposure, the relatively small volume sampled may have easily missed a diamond. Therefore, sample locations that did not return a diamond should not be considered barren.
- Further study is needed to determine where the diamonds are located within the dikes. Most dikes sampled that returned diamonds contained xenoliths. Spider Resources Inc. recently postulated that diamonds recovered from their Wawa property are found in xenoliths (*Spider Resources Inc., press release*, May 17, 2005).
- A variety of rock types host lamprophyre dikes and breccia, including all types of metavolcanic and metasedimentary rocks, as well as felsic intrusive rocks, including granodiorite, granite and syenite. No preference is apparent for those that contain diamonds.
- There are numerous lamprophyre locations that were not sampled in this project. Published Ontario Geological Survey (and its predecessors) reports and maps can be used to locate these exposures.
- The Kirkland Lake–Cobalt area hosts more than 30 kimberlite pipes, over half of which are diamondiferous. There are many targets being tested for potential kimberlite. In May 2005, Tres-Or Resources Ltd. discovered a kimberlite pipe on its Temagami North property, Lapointe 1 target, which is located 16 km northwest of sample GGDA0402.

Some further reasons to continue the search include:

- Dianor Resources Inc.'s report that the DBR (Diamond-Bearing Rock) at the Leadbetter property in Wawa is a conglomerate! (*Dianor, press releases*, December 21, 2005 and December 21, 2005)
- The sample, which returned the most diamonds (23), came from the Nipissing silver mine in Cobalt, where lamprophyre was identified in 1907!
- A search of "lamprophyre" in the General Index to Published Reports, Volumes 1 to 9, reveals more than 20 references.
- Diamond-bearing lamprophyre in the Kirkland Lake–Cobalt area are geochemically similar to those in Wawa (Figure 3).

Diamond Exploration – West of Kirkland Lake

Diamond exploration in the Kirkland Lake Resident Geologist District has increased over the past several years. Contact Diamond Corporation completed a mini-bulk sample on the 95-2 kimberlite pipe in Lundy Township in 2003. The results indicated that at that time, the pipe was uneconomical on its own. This stimulated an aggressive program of testing additional targets in the region. Since then, Contact Diamond announced the discovery of 2 pipes in Klock and Van Nostrand townships in 2004 and one pipe in Hudson township in 2005. A recent study has shown that a number of lamprophyre dikes in the district are diamondiferous (Grabowski and Wilson 2005).

On May 19, 2005, Arctic Star Diamond Corp. and Tres-Or Resources Ltd. announced the discovery of a kimberlite pipe (Lapointe) in northeast Sharpe Township. The discovery was a follow-up to the recently released Discover Abitibi Round Lake airborne magnetic survey (OGS 2004). The companies staked priority targets and these were explored by a high-resolution airborne magnetic and electromagnetic survey, till sampling and finally diamond drilling. Since that time, the pipe has been confirmed to be multiphase, diamondiferous and over 23 ha in area. Located in approximately the center of the Round Lake batholith, it appears to be unrelated to either the New Liskeard or Kirkland Lake kimberlite clusters. Dianor Resources Inc. reported that narrow dikes in southwest Pacaud Township, about 11.5 km east of the Lapointe discovery are kimberlite.

In December 2005, the results of modern alluvium sampling, collected during the summer of 2003, were released (Guindon and Reid 2005). The 5500 km^2 survey area is northwest of the New Liskeard kimberlite field, covering the Round Lake and Watabeag batholiths. Diamond potential kimberlite indicator mineral grains were found in Pacaud, Beauchamp, Cairo, Bannockburn and Milner townships. Numerous samples collected near the Montreal River Fault, north and south of Matachewan, contained kimberlite indicator minerals (KIMs). Other KIM anomalies are found in the Watabeag Batholith and the eastern part of the Round Lake batholith. An interesting cluster of anomalies occurs in northeast Pacaud Township.

Since the announcement of the discovery in Sharpe Township, large areas have been staked, mainly to the west of the pipe. Between May 18 and December 13, 2005, open ground in Yarrow, Morel, Kimberly, Shillington, Willison and Farr townships has been staked up. Between December 13, 2005, and February 1, 2006, the remainder of the open ground in Davidson, Sharpe, Smyth, Truax, Doon, Chown and Mickle townships has been staked, as well as, the north half of Rankin Township.

Areas to the north of the Lapointe kimberlite pipe, within and to the west of the Watabeag Batholith, have not been subjected to intense diamond exploration. Recent detailed airborne magnetometer surveys (Operation Treasure Hunt and Discover Abitibi) have identified numerous targets. Many subtle targets can be found within the north-trending band of Matachewan diabase dikes.

Numerous modern alluvium samples, collected by the OGS, returned kimberlite indicator minerals within this area. It should be noted that a lack of kimberlite indicator minerals in the OGS sampling does not necessarily diminish the potential of the area. Sample sites were selected by the OGS for modern alluvium samples prior to the release of the airborne magnetic survey. No KIM anomalies from OGS sampling exist in the vicinity of the Lapointe pipe, though till samples collected by Tres-Or Resources Ltd. contained KIMs. No modern alluvium samples were collected by the OGS from the stream crossing the pipe. The Lapointe pipe is within the Lake Timiskaming Structural Zone but it is more than 36 km from the closest pipe in the Kirkland Lake cluster and more than 40 km from the New Liskeard cluster. How and if the pipe fits in with the 2 clusters may significantly increase the potential for more pipes to be found away from the 2 clusters.

The availability of high resolution airborne magnetic data, recently published kimberlite indicator mineral data from modern alluvium samples, combined with geological mapping, make the large tracts of relatively unexplored ground, north and west of the Lapointe pipe, an exciting area for diamond exploration.

Kerr Mine – Gauthier Assemblage – Nettie Lake Gold Trend

Queenston Mining Inc.'s successful exploration at the Upper Beaver Mine site has once again brought to the forefront the significance of gold mineralization associated with structures along the northern contact of the Gauthier Assemblage as well as nearby subparallel structures.

Two significant areas with gold mineralization have been discovered along this trend. They are the Victoria Creek gold deposits and the Upper Beaver Mine deposits, both in Gauthier Township. The Victoria Creek deposits occur just below the stratigraphic top of the Gauthier Assemblage, and the Upper Beaver deposits, approximately 7 km to the east-southeast, occur above and below this contact. The Victoria Creek deposits are silicified, albitized and carbonatized, hydrothermally altered shear zones in volcanic rocks (tuff?). The Upper Beaver Mine deposits are characterized by the occurrence of quartz, magnetite, chalcopyrite, pyrite and gold in a variety of host rocks. In addition to the known mineralized zones, several zones of intense hydrothermal alteration, possibly associated with gold mineralization, have been discovered within the Gauthier Assemblage. These alteration zones and their gold potential have been discussed previously (Meyer et al. 1993, 1994, 1995, 1999 and 2004).

The Victoria Creek gold deposits have been explored by Sudbury Contact Mines Limited (now Contact Diamond Corporation) and a surface diamond drill-inferred resource of 5.5 million tons grading 0.10 ounce per ton was calculated in 1998. An underground advanced exploration project in the same year determined that the deposits were uneconomical at the time and the infrastructure was dismantled. Between 1912 and 1972 the Upper Beaver Mine recovered 140 709 ounces of gold from 580 562 tons of ore at a recovered grade of 0.242 ounce per ton gold, as well as 5978 tons of copper. Recent diamond drilling by Queenston Mining Inc. intersected impressive gold-copper mineralized zones north of and below previous mine workings as well as adjacent to and south of the workings.

Four kilometres west-northwest of the Gauthier Assemblage, a group of rocks east of Nettie Lake in Morrisette Township have been considered an outlier of the Timiskaming Assemblage. The rocks are partly strongly carbonatized and some may be hydrothermally altered volcanic rocks. The potential for gold mineralization was previously discussed (Meyer et al. 1994). These rocks align with the long axis of the Gauthier Assemblage and may be part of this assemblage. Occasional specks of jasper in the sediments do not support this possibility. Recently, Gold Insight Resources Ltd. completed a diamond-drill hole (DDH 05-01) from north to south to intersect the northern contact of the Nettie Lake sedimentary/felsic volcanic rocks. The hole penetrated mafic volcanic rocks of the Lower Blake River Assemblage before intersecting 3 m of conglomerate followed by greywacke ranging from finely laminated, fine-grained to gritty sedimentary rock. A conglomerate (possibly agglomerate) bed occurs at or very near to the stratigraphic top of the Gauthier group of calc-alkalic volcanic rocks both north of the Victoria Creek gold deposits and at the Upper Beaver Mine. The conglomerate unit at the Victoria Creek zone is overlain by a 1 m wide argillite (or tuff) unit, which in turn is overlain, apparently conformably, by the Lower Blake River Assemblage. At the Upper Beaver Mine, the geology is similar; however, the conglomerate unit is much thicker. Conglomerate/agglomerate at each of the 3 sites perhaps suggests that the Nettie Lake sediments and volcanic rocks could be part of the Gauthier Assemblage (?). This could have some implications for gold mineralization.

The Kir-Vit Property located in McVittie Township, approximately 7 km east-southeast of the Upper Beaver Mine, aligns with the Victoria Creek and Upper Beaver Mine deposits. An exploration shaft was sunk on the property to a depth of 300 feet and gold mineralization was indicated over a strike length of 600 feet. Drill intersections ranged from 0.1 to 1.32 ounce per ton gold over core lengths of 1.5 to 15 feet (The Northern Miner, June 26, 1980). Follow-up diamond drilling by Edomar Resources Inc. intersected a carbonatized zone with the best diamond-drill hole (E-80-3 or MNDM DCL # KL 1668) intersecting 2 sections grading 0.08 ounce per ton gold over 5 feet and 0.06 ounce per ton gold over 4 feet. If the Kir-Vit gold mineralization is part of this general trend, then further extrapolation of it to the east would suggest that it is a possible splay structure off the Cadillac–Larder Lake deformation zone commencing near the Kerr Mine.

Toogood (D. Toogood, personal communication with G. Grabowski in 1986) suggested that the favourable trend could perhaps even be extrapolated as far west-northwest as the Bourkes Gold Mine in Benoit Township. This structure could be analogous with the Pipestone and/or North Branch Porcupine–Destor fault zone.

Gold mineralization along the Kerr–Nettie Lake trend, and possibly beyond, is mostly associated with pyrite or both pyrite and chalcopyrite. Some sections along this trend, particularly in overburden-covered areas in Gauthier Township, should be covered with IP surveys to search for possible gold-associated conductors.

Paleoplacer Gold Potential in the Lorrain Formation of the Huronian Supergroup

Broad geological similarities between the sediments of the Witwatersrand Basin in South Africa, hosting the largest known global gold deposits, and sedimentary rocks of the Huronian Supergroup in Ontario are well known. Not only are the rock types similar, they are also similar in age. The formation of orthoquartzite and quartz pebble conglomerate of the Lorrain Formation of the Cobalt Group suggests that hydro-mechanical sorting mechanisms for some of the Huronian and Witwatersrand sediments were similar.

Huronian sediments in the northern Cobalt Embayment area are likely the detrital erosional products of gold-bearing Archean rocks derived from the north. Deep, south-trending paleovalleys were carved in Huronian times north of the Cobalt embayment. These valleys, up to 70 km in length and several kilometres in width, are now filled with Huronian sediments. One such sediment filled paleovalley starts about 30 km south of Timmins. In all likelihood, eroded material derived from the Timmins Gold Camp traveled down this valley to the south. Another sediment filled paleovalley is continuous up to 20 km south of the Porcupine–Dester deformation zone near Matheson and another such valley transects the Larder Lake Gold Camp near Virginiatown.

The occurrence of quartz pebble conglomerate beds and orthoquartzite in the Lorrain Formation make it attractive for potential paleoplacer gold deposits. The major sedimentary horizons of the 2000 to 3000 m thick Lorrain Formation, from top to bottom, are orthoquartzite, hematitic orthoquartzite, micaceous sandstone, feldspathic sandstone and hematitic siltstone. Pebble conglomerate beds occur throughout (Colvine 1982). Anomalous gold values have been obtained in sampling some of the quartz pebble beds of the Huronian Formation. Clearly gold is present and the environment was potentially conducive to forming paleoplacer, reef style gold deposits similar to those in South Africa. Colvine (1982) came to the conclusion that it is not a question if gold is present but rather "where and in which formation it is concentrated?" and "is it concentrated enough over sufficient widths and areas to allow its economic extraction?" To follow up on evaluating the paleoplacer gold potential, Long and Leslie (1986) sampled mostly the Gowganda Formation, which underlies the Lorrain Formation. They found high background values for gold (5 ppb) in the Gowganda Formation do represent a 2 to 3 times enrichment in respect to crustal abundance. They further concluded that the absence of extensive fluviatile strata in the Gowganda Formation of the northern Cobalt Plain makes the potential for placer concentrations of heavy minerals very low. However, Colvine (1981) considers that local high concentrations of gold in the Lorrain Formation may reflect further concentration of heavy minerals by rivers, which eroded and reworked parts of the underlying Gowganda Formation.

Law (2000), in the quest for "Witwatersrand style" mineralization potential, considers a 2 stage approach:

1) Basin selection based on a close geological match with the Witwatersrand;
2) Use of a hydrothermal model for the mineralization, including evidence for appropriate diagenetic and hydrothermal processes within the basin, their relationships to structure and known mineralization.

Law further points out that the overwhelming majority of gold and uranium mineralization is located within the upper Witwatersrand succession. Furthermore, mineralization is localized on unconformity surfaces along the proximal northern and western margins.

The Lorrain formation is near the top of the Huronian Supergroup and there is ample evidence for hydrothermal alteration of the sediments. Most likely low-angle, crosscutting pebble conglomerate beds would also be significant for gold concentrations in the Lorrain Formation. Such relationships can only be identified in a geological environment with numerous marker horizons, good outcrop and/or good diamond-drill hole coverage.

The concept of potential paleoplacer gold deposits in the Huronian Supergroup is not new. The application of this concept led to the discovery of the quartz pebble conglomerate beds in the Elliott Lake area. It can be argued that the

Elliott Lake uranium discoveries caused exploration to focus on that area at the expense of exploring other areas of the Cobalt Embayment for paleoplacer gold. Although various attempts at determining the paleoplacer gold potential of the Cobalt Embayment have been made, the potential remains virtually untested. Extensive sorting of sand grains occurred when the orthoquartzite of the Lorrain Formation formed, and quartz pebble conglomerate beds within them should have the best potential for gold.

Another, perhaps less promising potential, is the concentration of diamonds in the quartz pebble conglomerate beds. Diamonds have been discovered in some of the Witwatersrand quartz pebble conglomerates. Some Archean-aged lamprophyre dikes in the Abitibi are now known to be diamondiferous. It is conceivable that diamonds freed up during erosion could have become concentrated in some of the quarts pebble conglomerate beds of the Huronian sediments.

SPECIAL PROJECTS

Discover Abitibi Lamprophyre Sampling Project

The Discover Abitibi Initiative (DAI) is funded by the private sector and the federal and provincial governments (respectively Industry Canada through FedNor and the Ontario Ministry of Northern Development and Mines through the Northern Ontario Heritage Fund Corporation). The DAI is designed to stimulate mineral exploration in the Ontario portion of the Abitibi greenstone belt. A project to sample lamprophyre dikes for their diamond potential in the Kirkland Lake–Cobalt area was approved by the Discover Abitibi Approvals committee.

In 1996, diamonds were reported in lamprophyre dikes in the Wawa area (Sage 2000). Since that time, more than $30 million has been spent exploring for diamonds in rocks in the Wawa area. Since 2000, more than 60 lamprophyre dikes in the Kirkland Lake–Cobalt area were sampled by Kirkland Lake MNDM staff. More than 200 whole rock and trace element analyses were completed on these samples. Preliminary observations from these analytical results indicate that the lamprophyre dikes in Kirkland Lake–Cobalt area are chemically similar to those in the Wawa area and warrant further investigation for their diamond potential. Subsequently, diamonds were found in a lamprophyre dike and a heterolithic breccia in Lorrain Township, south of Cobalt.

During the 2004 field season, 45 lamprophyre dikes in the Timmins–Kirkland Lake–Cobalt area were sampled. The samples were shipped to SGS Lakefield Research Ltd. in Lakefield, Ontario, for processing. The samples (24 kg each) were tested for diamond content by caustic dissolution. Whole rock and trace element analyses were also completed to compare with the existing analyses. Sufficient sample was collected and retained for future petrographic studies. The results of the sampling were released as OGS OFR 6170 (Figure 2; Grabowski and Wilson 2005).

Diamonds were recovered from 6 of the 45 samples submitted. Sample GGDA0402 in Chamberlain Township returned one microdiamond. Samples GGDA0432 and GGDA0433, collected from 2 lamprophyre dikes in Pacaud Township, returned 1 and 5 microdiamonds, respectively. Sample GGDA0435 from Burt Township returned 3 microdiamonds, while sample GGDA0441 from Coleman Township near Cobalt contained 23 microdiamonds. Sample GGDA0410 from McVittie Township near Larder Lake contained one, 0.011 carat (2.214 mg) macrodiamond. The results of this project demonstrate that diamonds occur in the lamprophyric rock from the Kirkland Lake–Cobalt area.

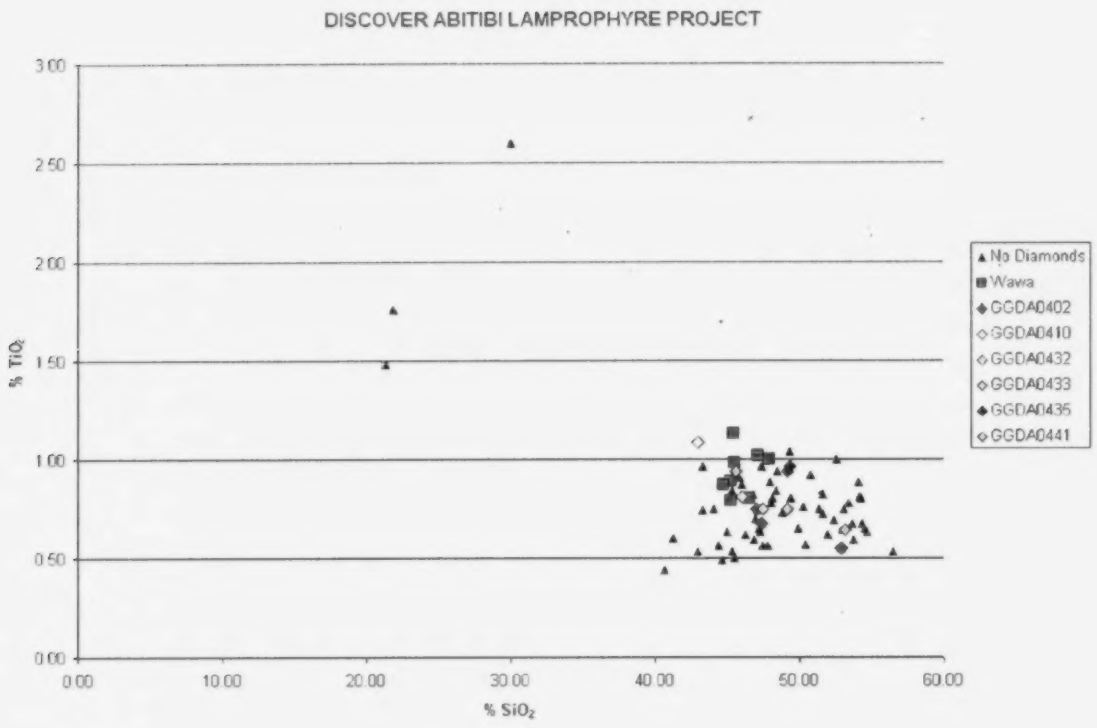

Figure 2. SiO_2 vs TiO_2 plot of Discover Abitibi and Wawa Area lamprophyre samples

Croxall Project

Wallbridge Mining Company Limited's Ben Nevis property covers most of Ben Nevis Township and the eastern part of Clifford Township. The property encompasses the Croxall prospect (MDI32D05SW00035), a well-exposed hydrothermal breccia pipe, which historically has yielded anomalous gold, silver, copper and molybdenum assays (Gledhill 1928; Jensen 1975; Croxall 1980; Bennett 1988; Watkins and Melling 2004).

The purpose of the Croxall Project was to combine detailed geological mapping, petrography and geochemical data in an effort to characterize the style and spatial extent of mineralization, including hydrothermal alteration of the breccia pipe. A review of geological characteristics associated with similar mineralized hydrothermal breccia pipes provided insight into the exploration potential of the Verna Lake area.

The breccia, which is roughly circular in plan, is hosted by feldspar porphyritic andesite, has a diameter of approximately 32 m on surface and has been intersected by diamond drilling at least 150 m below surface. It is clast supported and has a matrix composed of quartz, calcite and ankerite. Clasts in the core of the breccia are mostly angular, tabular in shape, poorly sorted and are typically larger than clasts in the mineralized margins where they tend to be well- to sub-rounded and are moderately to well-sorted.

Porphyry-style copper-molybdenum-gold mineralization is primarily hosted within the peripheral "mill" breccia, which occurs at the contact between the breccia pipe and the host andesite. Mineralization consists of 3 to 5% sulphides with localized areas of up to 10%, which consist of mostly pyrite and chalcopyrite with lesser molybdenite and gold. The sulphides occur as disseminations, veinlets and semi-massive accumulations in the breccia matrix and in fractures within the adjacent andesite.

Sericite alteration (with lesser chlorite) is pervasive throughout the breccia, whereas silica, sericite, chlorite, epidote and potassic alteration are readily observed in drill core proximal to the breccia pipe. In the core of the breccia, where sericite alteration is most intense, plagioclase phenocrysts are barely distinguishable from the sericite groundmass. Rocks in and around the breccia pipe have all undergone net losses of Na_2O and gains of K_2O. Losses in Na_2O, Sr, Cr and Zn and gains in K_2O, MnO, Rb and Cs coincide with mineralized portions of breccia.

The shape, contacts with host rocks, hydrothermal alteration, distribution of textures and mineralization all suggest that the Croxall breccia is the product of hydrothermal collapse and ensuing fluidization and mineralization. Relationships observed suggest there was at least one episode of prolonged fluidization and mineralization along the margins of the breccia, which post-date the initial event that produced the barren, angular breccia observed in the core of the breccia pipe. It is thought that fluids responsible for fluidization and mineralization of the periphery were restricted to the weaker, fractured, margins of the pipe rather than the less permeable core of the breccia.

Collectively, the geological setting, host rocks, metal associations, distribution and characteristics of alteration and mineralization in the Verna Lake area suggest mineralization of the area is analogous to porphyry copper-molybdenum-gold mineralization associated with Phanerozoic subduction environments, yet at a much smaller scale.

Future exploration efforts in the area should focus on identifying and defining the extent of features that contain porphyry-style characteristics in an effort to locate ore-grade mineralization. Late, high-level intrusions and associated dikes of calc-alkalic composition throughout the Blake River Group should be considered prospective for porphyry-style copper-molybdenum-gold mineralization, especially if they are closely linked to hydrothermal alteration (particularly sericite-quartz and/or potassium feldspar-biotite) and/or hydrothermal breccias and disseminated or stockwork-like sulphide mineralization (particularly pyrite ± quartz and/or quartz-pyrite-chalcopyrite-molybdenum ± gold).

Testing of Diamond Drill Core at Kirkland Lake Remote Drill Core Storage Site for Volcanogenic Massive Sulphide (VMS) Potential

Selected diamond-drill core stored at the Kirkland Lake Remote Drill Core Storage Site was sampled and analyzed for major oxides. The purpose was to determine if geochemical evidence exists suggesting that some volcanic rocks had been subjected to hydrothermal alteration typically associated with VMS formation.

Nineteen (19) samples were collected from core from Bradette Township, approximately 60 km north of Lake Abitibi; 2 samples were collected from core from Noseworthy Township, also approximately 60 km north of Lake Abitibi and 1 sample was collected from core from Moody Township, 10 km west of Lake Abitibi (Tables 10 and 11). Pyroclastic volcanic rocks assumed to be pervious at the time of possible VMS development were preferentially selected. Some of these rocks were sericitized and some appeared silicified. Sodium (Na_2O) depletion and magnesium (MgO) enrichment, the most prevailing geochemical indicators of hydrothermal alteration associated with VMS formation, were not found to be evident. The SiO_2 content of the rocks indicates that none of the samples analyzed are rhyolite. Two samples contain 71% to 72% SiO_2 and are therefore rhyodacite.

Although the core samples tested do not suggest evidence of nearby VMS related hydrothermal activity, it needs to be stressed that sample density is far too sparse to draw any reliable conclusions. Diamond-drill core from many locations around the Kirkland Lake Regional Resident Geologist District are available for mapping and sampling at relatively little cost, and this valuable resource should be evaluated as part of any regional assessment of VMS potential.

OGS ACTIVITIES AND RESEARCH BY OTHERS

A number of Ontario Geological Survey mapping and research projects were underway or completed in the Kirkland Lake Regional Resident Geologist District. Details of the projects are reported in Summary of Field Work and Other Activities 2005 (Baker et al. 2005) Ontario Geological Survey (OGS).

B.R. Berger and S. Préfontaine mapped Powell, Bannockburn and Montrose townships at a scale of 1:20 000 (Berger and Préfontaine 2005; Préfontaine and Berger 2005).

M.G. Houlé, S. Préfontaine and B.R. Berger examined the komatiite-associated Ni-Cu mineralization in Bannockburn Township (Houlé, Préfontaine and Berger 2005).

N.F. Trowell and Z.B. Madon will re-evaluate the RADARSAT-1 geological interpretation of the Lightning River Area using new RADARSAT-2 data (Trowell and Madon 2005).

V.E. Felix completed modern alluvium sampling in the Gogama–Shining Tree area (Felix 2005).

R.D. Dyer initiated a study into gold dispersion and geochemical response in surficial media. The area of interest is north and west of Matachewan (Dyer 2005).

J.A. Ayer and N.F. Trowell initiated a geological compilation of the Cobalt area (Ayer and Calhoun 2005).

Carlton University

G. Dix relogged hole LT-1, drilled in 1963 off Dawson Point in Harris Township to test a magnetic anomaly. The hole intersected over eight hundred feet of Palaeozoic sedimentary rocks. There were some important differences in the Ordovician – Silurian boundary noted (G. Dix, personal communication, 2005).

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Table 1. Summary of claims recorded and assessment work credits filed in the Kirkland Lake Resident Geologist District – 2005.

Year	Claims Units Recorded	Claim Units Cancelled	Claims Units Active	Total ($)
2005	12 989	5830	40 500	8 575 417
2004	9738	5484	28 563	10 584 733
2003	6953	6249	28 983	4 895 030
2002	7097	5861	21 940	3 839 275
2001	4308	6229	20 712	2 888 711

N.B. Claim data for years 2001 to 2004 are for the Larder Lake Mining Division.

Table 2. Mine production and reserves in the Kirkland Lake Regional Resident Geologist's District – 2005.

Mine	Production to end of 2005		Production in 2005		Reserves at end of 2005	
	Tonnage @ Grade	Total Commodity	Tonnage @ Grade	Total Commodity	Tonnage	Grade
Extender Minerals - North Williams	N/A	N/A	99% barite	12 000 t barite	More than 4 years	99% barite
Holloway Mine	5 308 397 tons @ 0.162 ounce per ton Au	858 821 ounces Au	576 305 tons @ 0.131 ounce per ton Au	75 488 ounces Au	Reserve (t) Prv: 44 263 Prb: 83 490 Resource (t) Mea: 298 271 Ind: 678 384	 5 996 g/t 6 683 g/t 6 932 g/t 7 918 g/t
Kirkland Lake Gold Inc.*	294 206 tons @ 0.305 ounce per ton Au	89 729 ounces Au	136 772 tons @ 0.336 ounce per ton Au	45 865 ounces Au	Reserve (tons) Prv: 1 149 608 Prb: 872 202 Resource (tons) Mea: 921 029 Ind: 1 029 319 Inf: 731 558	Ounce per ton Au 0.43 0.50 0.38 0.36 0.44

* Kirkland Lake Gold Inc. includes the Wright Hargreaves, Lake Shore, Teck Hughes, Kirkland Lake and Macassa properties. Production figures are for the fiscal year ending April 30, 2005.

Table 3. Assessment files received in the Kirkland Lake Regional Resident Geologist's District in 2005.

Abbreviations

AEM	Airborne electromagnetic survey	IP	Induced polarization survey
AM	Airborne magnetic survey	Lc	Linecutting
AVLF-EM	Airborne Very Low Frequency EM survey	Other	Other study
Beep	Beep mat survey	OvD	Overburden drill hole(s)
Bulk	Bulk sampling	PEM	Pulse electromagnetic survey
DD	Diamond drilling	PGM	Platinum group metals
DDH	Diamond drill hole(s)	Pr	Prospecting
DGP	Down-hole geophysics	PW	Physical work
FLTEM	Fixed Loop Transient EM survey	RC	Reverse-circulation drill hole(s)
Gc	Geochemical survey	RE	Re-evaluation of surveys
GL	Geological survey	rTr	Trenching
Ind	Industrial Mineral Study	SA	Sampling (other than bulk)
KIM	Micro-Diamond Processing	sTr	Stripping
M	Ground magnetic survey	VLEM	Vertical loop electromagnetic survey
Gv	Gravity survey	VLF-EM	Very low frequency electromagnetic survey
HLEM	Horizontal loop electromagnetic survey	Ug	Underground work

Township	Company Name "Property Name"	Year (# refers to 2005 project)	Type of Work	AFRO Number	Resident Geologist Office File Designation
Alma, Flavelle, Holmes	Brigadier Gold Limited "Chartre-Dufresne Property"	2004-2005 (1)	DD(12)(1451m), SA, GL, Lc, IP, M	2.29525, 2.29528, 2.30307	KL-5436, KL-5504
Amyot, Browning, Hodgetts, Unwin	Hattie, D.	2003-2005 (2)	Pr, GL, SA, Gc	2.29448	CO-2992
Argyle, Baden	Novawest Resources Inc "Solano Property"	2004-2005 (3)	DD(1)(222m), SA	2.29577, 2.29799	KL-5441
Argyle, Bannockburn, Doon, Hincks, Midlothian, Montrose, Powell, Zavitz	Mustang Minerals Corp. "Bannockburn Property"	2004	AM, AEM, DGP	2.29621, 2.29671, 2.29935, 2.29867, 2.29869	KL-5444, KL-5449, KL-5469, KL-5493
Arnold	Kirkland Lake Minerals Inc.	2002-2004	DD(3)(278m), KIM, Lc, M	2.28955, 2.28954	KL-5422
Askin, Burnaby, Cassels, Eldridge, Gooderham, Hammell, Hartle, Hebert, Kenny, South Lorrain, Riddell	Tres-Or Resources Ltd./Adroit Resources Inc. "Temagami East Property"	2004-2005 (4)	Lc, M, AM, AEM, HLEM, Pr, Other	2.29394, 2.29132, 2.29415, 2.29396, 2.29647, 2.29937, 2.29343, 2.28544	CO-2993, CO-2994, CO-2995, CO-2996
Askin, Hartle, Law, Milne, Strathcona, Strathy	Temex Resources Corp. "Wilson Lake Diamond Project"	2004-2005 (5)	Gc, KIM, Pr	2.29822, 2.30623	CO-2997
Asquith	Stonebridge Resources Exploration Ltd. "Gibson Property"	2005 (6)	Lc, DD(3)(395m), SA	2.30039	CO-2998
Asquith, Churchill	O'Connor, T.A.	2004-2005 (7)	Pr, SA, sTr	2.29479, 2.30628	CO-2999
Asquith, Churchill, Macmurchy	Skead Holdings Ltd.	2004-2005 (8)	GL, Gc, SA	2.28676, 2.29655, 2.30287	CO-3000

Township	Company Name "Property Name"	Year (# refers to 2005 project)	Type of Work	AFRO Number	Resident Geologist Office File Designation
Auld, Banks, Barber, Barr, Brigstocke, Cane, Cole, Dane, Firstbrook, Henwood, Hudson, Klock, Leo, Lundy, Speight, Van Nostrand, Willit	Contact Diamond Corporation "Timiskaming Diamond Project"	2003-2005 (9)		Technical Report	CO-3001
Bannockburn, Powell	Mustang Minerals Corp. "Powell Property"	2004	GL, SA	2.29064	KL-5415
Barnet	Royal Victoria Minerals Ltd.	2004	DD(2)(423m), SA	2.29286	KL-5428
Barnet, Cook, Garrison, Guibord, Hislop, McCool, Michaud, Thackeray	St Andrew Goldfields Ltd. "East Timmins Project"	2003-2005 (10)	Pr, sTr, GL, Gc, SA, DD(3)(492m), Lc, M, HLEM	2.28903, 2.29074, 2.29079, 2.30022, 2.30010, 2.30446, 2.30447, 2.30130	KL-5407, KL-5416, KL-5460, KL-5509, KL-5511, KL-5518
Barnet, Michaud	Royal Victoria Minerals Ltd. "Moneta MGB Option"	2005 (11)	DD(4)(1001m), SA	2.30188	KL-5472
Beatty	JML Resources Limited "Leach Lake Property"	2005 (12)	Lc, M	2.29387, 2.29974	KL-5432
Beatty	St Andrew Goldfields Ltd.	2005 (13)	SA, Gc	2.30464	KL-5505
Beatty	St Andrew Goldfields Ltd. "Beatty West Property"	2005 (14)	M, Gc	2.30855, 2.30825	KL-5510
Beatty	St Andrew Goldfields Ltd. "Painkiller Lake Property"	2004-2005 (15)	Pr, SA	2.3016	KL-5471
Beatty	Vedron Gold Inc. "Windsor Property"	2005 (16)	Pr, SA	2.30905	KL-5519
Beauchamp, Bryce, Cane, Henwood	Metalex Ventures Inc. "New Liskeard Property"	2005 (17)	AM	2.29308	CO-3002
Ben Nevis	Wallbridge Mining Company Limited "Ben Nevis Property"	2003	DD(1)(276m), SA	2.29657	KL-5465
Ben Nevis, Tannahill	Falconbridge Limited "Project BN04-63"	2004	Lc, FLTEM, DGP, DD(2)(623m)	2.30029, 2.30127, 2.30484	KL-5464, KL-5470
Bernhardt	Golden Valley Mines Ltd. "Blue Mountain Prospect"	2005 (18)	Lc, M, IP	2.30249	KL-5489
Best	King, D.F.	2004	Pr, SA, Lc	2.28798	CO-3003
Best, Brigstocke, Cassels, Gillies Limit	Temex Resources Corp. "Latchford Project"	2004-2005 (19)	Lc, M, IP, GL, Gc, DD(16)(2561m), SA	2.29878, 2.29167, 2.30113	CO-3004, CO-3005
Best, Gillies Limit, Lorrain, South Lorrain	Tres-Or Resources Ltd./Adroit Resources Inc. "Cobalt South Diamond Project"	2004-2005 (20)	AEM, AM	2.29257, 2.30116	CO-3006
Best, Strathy	Shoumard, G.C.	2004	Pr	2.28882	CO-3007
Bisley, Melba	Noranda Inc. "BS-51 Property"	2004	Lc, M, HLEM	2.30485	KL-5498
Black	Leahy, M.J.	2005 (21)	RE	2.30477	KL-5490
Boston	Belec, M.R.	2004	Pr, SA	2.29238	KL-5419
Boston	O'Brien, P.D. "Golden Darling Property"	2005 (22)	SA	2.29927	KL-5517

Township	Company Name "Property Name"	Year (# refers to 2005 project)	Type of Work	AFRO Number	Resident Geologist Office File Designation
Bowman, Currie	Kinross Gold Corporation/Echo Bay Mines Ltd. "Currie-Bowman Property"	2005 (23)	Lc, IP, M, HLEM	2.3049	KL-5494
Bradette, Noseworthy	Eso Uranium Corp "Mikwam Project"	2005 (24)	AM, AEM	2.30488	KL-5516
Browning, Sheard	Annett, R.	2004-2005 (25)	rTr, SA	2.30548, 2.30606	CO-3008
Bucke	Cabo Mining Enterprises Corp. "North Cobalt Property"	2004-2005 (26)	Gc, VLF-EM, Other	2.28998, 2.30438	CO-3009
Bucke	Novawest Resources Inc. "Bucke Pipe Property"	2000, 2005 (27)	DD(11)(2289m), SA, M	2.29592, 2.30456	CO-3010
Bucke	Walton P. and Peddie, L. "Peddie Kimberlite Pipe Property"	2005 (28)	sTr	2.30177	CO-3011
Bucke, Coleman, Firstbrook, Kittson, Lundy	Tres-Or Resources Ltd./Adroit Resources Inc. "Temagami North Diamond Property"	2002-2005 (29)	AEM, AM, Lc, HLEM, GL, Gc, DD(10)(1069m), SA, Pr, Other	2.29095, 2.29087, 2.29065, 2.28874, 2.29904, 2.29838, 2.29902	CO-3012, CO-3013, CO-3014
Burrows	Temex Resources Corp. "Jumping Moose Property"	2005 (30)	Lc, IP, M	2.30145	CO-3015
Burt	Bastarache, G.	2005 (31)	GL, SA	2.30697	KL-5501
Burt	Winteroad Mineral Corporation	2005 (32)	Lc, IP	2.30299	KL-5488
Cairo	Alexandria Minerals Corporation "Matachewan Property"	2004		Technical Report	KL-5437
Cairo	Biralger Resources Ltd.	2004-2005 (33)	sTr, GL	2.29124	KL-5423
Cairo	Carmax Explorations Ltd. "Whiskeyjack Creek Property"	2004	DD(10)(2209m), SA	2.28524	KL-5417
Cassels	Youngs, B.E. "Sauve Lake Property"	2005 (34)	Pr, SA	2.30506	CO-3016
Catharine	Jomi Minerals & Expediting Ltd.	2004	M, SA	2.29861	KL-5486
Catharine	Salo, A.J.	2004	Pr, SA	2.29325, 2.309118	KL-5427
Catharine	Salo, A.J. "Hounslow Property"	2003	RE, SA	2.30038	KL-5467
Catharine, Marter	Link, T.A.	2003-2005 (35)	DD(3)(232m), SA	2.29957	KL-5457
Catharine, Pacaud	Atapa Minerals Limited	2004	Pr, SA	2.28883	KL-5438
Catharine, Pacaud	Golden Valley Mines Ltd. "Mindoka Prospect"	2003-2005 (36)	DD(3)(360m), SA	2.303	KL-5480
Chamberlain	Lashbrook, R.L.	2005 (37)	GL	2.30062	KL-5462
Chown, Haultain, Lawson	MacGregor, R.A. "Keora Property"	2003-2005 (38)	SA, Pr	2.29578, 2.29679	CO-3017
Churchill	Annett, R.	2005 (39)	sTr	2.3055	CO-3018
Churchill, Knight, Leonard, Macmurchy, Natal, Tyrrell	International KRL Resources Corp. "Copper Hill Property"	2004	RC(53)(4974m), SA	Technical Report, 2.28909	CO-3019, CO-3020
Clifford	Harrington, M.S. "C-14 Kimberlite Property"	2003	Gc	2.28783	KL-5406

Township	Company Name "Property Name"	Year (# refers to 2005 project)	Type of Work	AFRO Number	Resident Geologist Office File Designation
Clifford, Elliott	Tiger Gold Exploration Corporation "Clifford-6 & Elliott-35 Properties"	2005 (40)	Lc, M, VLF-EM, GL	2.29305, 2.29267, 2.29228, 2.29455, 2.29667, 2.30524, 2.30496, 2.29812, 2.29913, 2.29544, 2.30234, 2.29505, 2.29486, 2.29484, 2.29612, 2.29669	KL-5426, KL-5434, KL-5447, KL-5453, KL-5513
Coleman	Trainer, H.	2005 (41)	rTr	2.30028, 2.30179	CO-3021
Coleman, Gillies Limit	Cabo Mining Enterprises Corp. "Cobalt Area Project"	2004-2005 (42)	DD(24)(3442m), GL, Gc, Pr, SA	2.29596, 2.30305, 2.30341, 2.29779, 2.28896, 2.29134, 2.28634, 2.30054, 2.30276	CO-3022, CO-3023, CO-3024
Coleman, Gillies Limit	Carroll, J. "Carroll-Hester JV Property"	2004	AM, AEM	2.30786	CO-3025
Coulson, Warden	Golden Chalice Resources Inc. "Shallow River Project"	2005 (43)	Lc, M, HLEM	2.29567	KL-5439
Coulson, Warden	Windsor, G.F.	2003	rTr, Pr, SA	2.29562	KL-5440
Davidson	Fekete, M., Kiernicki, F., Dianor Resources Inc. "Davidson 2 Property"	2004	Lc, M	2.29208	KL-5418
Dokis	Marion, E.J. "Malamute Property"	2004-2005 (44)	DD(1)(230m)	2.2975	KL-5446
Dufferin	Annett, R. "McAra Lake Property"	2004-2005 (45)	sTr	2.29331	CO-3026
Dufferin, North Williams	Liberty Mines Inc. "McAra Lake Property"	2003, 2005 (46)	Lc, M	2.30777, Technical Report	CO-3027, CO-3028
Eby	GLR Resources Inc. "Eby-Otto Property"	2004-2005 (47)	DD(2)(774m), SA	2.30646	KL-5495
Eby, Otto	Marion, E.J. "Plinky Property"	2003-2005 (48)	DD(1)(23m), sTr, PW, SA	2.30095, 2.29948, 2.30590, 2.30475	KL-5463, KL-5500
Fawcett	Rosko, P.A. "Granite Lake Project"	2004	sTr, SA	2.28906	CO-3029
Frecheville	Noranda Inc. "Frecheville 55 Property"	2004	Lc, M, HLEM	2.29024	KL-5413
Garrison	Royal Victoria Minerals Ltd. "Conagas Option"	2005 (49)	DD(5)(2057m), SA	2.30186	KL-5479
Garrison	Royal Victoria Minerals Ltd. "Deloye Option"	2004	DD(3)(549m), SA	2.30129	KL-5461
Gauthier	Marion, E.J. "Northlander Group"	2005 (50)	DD(1)(33m)	2.30071	KL-5466
Gauthier, Hearst, McElroy, McVittie	Brigadier Gold Limited "Larder Lake Diamond Project"	2004-2005 (51)	Gc, Lc, M	2.29385, 2.30441	KL-5450, KL-5507
Gauthier, Hearst, McElroy, McVittie, Rattray, Skead	Skead Holdings Ltd.	2003-2004	sTr, SA, Lc	2.28971, 2.29063, 2.29558	KL-5402, KL-5483
Grenfell	1572774 Ontario Inc. "Maple Gold/McCombe Property"	2004	DD(13)(1203m), SA	2.29119	KL-5425
Grenfell, Teck	Golden Valley Mines Ltd. "Cook Lake Prospect"	2005(52)	Lc, M, IP	2.30314	KL-5484

Township	Company Name "Property Name"	Year (# refers to 2005 project)	Type of Work	AFRO Number	Resident Geologist Office File Designation
Grenfell, Teck	Hinterland Metals Inc.	2004-2005 (53)	Lc, IP, VLF-EM, DD(10)(1113m), SA, AM	2.30324	KL-5485
Guibord, Munro	Croesus Gold Inc. "Wood-Croesus Property"	2003	GL, IP, Lc, sTr	2.29851	KL-5452
Halliday, Midlothian, Montrose	Falconbridge Limited/Noranda Inc.	2004-2005 (54)	DD(2)(565m), SA, Lc, M, HLEM	2.30654, 2.30651, 2.30769, 2.30906, 2.30907	KL-5499
Harker, Holloway	Golden Harker Explorations Limited	2004-2005 (55)	DD(1)(149m), SA, Lc, IP, M, VLF-EM	2.29889	KL-5451
Harker, Holloway	Newmont Canada Limited "Blacktop & Holloway Property"	2003-2004	DD(17)(1692m), SA	2.28942	KL-5409
Hepburn	Belanger, R.	2004	Lc, IP	2.2903	KL-5420
Holloway	Tiger Gold Exploration Corporation "H & L Group"	2004-2005 (56)	Lc, M, VLF-EM	2.28950, 2.28910, 2.28972, 2.28997, 2.29014, 2.29080, 2.29180, 2.29170	KL-5404, KL-5414, KL-5424
Holloway, Tannahill	Sheldon-Larder Mines Limited "Magusi Property"	2005 (57)	DD(1)(125m)	2.30412	KL-5487
Holmes	Kilbourne, M.W. "Island 27 Gold Property"	2005 (58)	DD(2)(318m), SA, Gc	2.30507	KL-5512
Ingram	Marshall, F.D.	2003	DD(1)(245m)	2.29846	CO-3030
Katrine	Ranger Resources Inc. "Forseyth Lake Property"	2004	Lc, M	2.2897	KL-5405
Katrine	Ranger Resources Inc. "Row Lake Property"	2004	Lc, M, OvD(1)(10m)	2.28969	KL-5443
Katrine, Ossian	New Walsh Katrine Resources Inc.	2005 (59)	Lc, M	2.30007	KL-5459
Kerrs	Sage Gold Inc. "Kerrs Property"	2004-2005 (60)	Lc, M, SA, Gc	2.30162	KL-5476
Kittson	Watts, H.	2003	sTr	2.28501	CO-3031
Knight	Bear Paw Resources Inc. "Brush Lake Property"	2003-2004	DD(4)(372m), SA	2.28375	CO-3032
Knight, Tyrrell	Temex Resources Corp. "Juby Gold Project"	2003-2005 (61)	Lc, sTr, GL, SA	2.29460, 2.29458	CO-3033
Lamplugh	Noranda Inc. "LPG-03 Property"	2005 (62)	EM	2.30323	KL-5482
Lebel	Kirkland Lake Gold Inc. "Continental Property"	2004	DD(17)(3082m), SA	2.29524	KL-5435
Lebel	Marion, E.J. "Continental-Federal Extension"	2004-2005 (63)	Lc, M, Pr	2.30295	KL-5481
Lebel	O'Connor, T.A.	2005 (64)	rTr, SA	2.29390, 2.29434	KL-5429
Lebel	Vault Minerals Inc. "Moffat-Hall Property"	2003-2004	DD(9)(640m), SA	2.28958	KL-5408
Lebel, Teck	Laing, D. "Kirana Group"	2005 (65)	Lc, Pr, VLF-EM	2.29982	KL-5458
Leonard, Tyrrell	International KRL Resources Corp. "Spider Lake Property"	2004	GL, SA, Pr	2.28729	CO-3034
Macmurchy	Pinkerton, G.D./MacCallum, R. "Foisey Lake Group"	2005 (66)	Pr, sTr, SA	2.30775	CO-3035
Matsonville	6070205 Canada Inc. "Goose Egg Lake Property"	2005 (67)	DD(3)(702m)	2.30443	KL-5492
Marriott	Harte Gold Corp. "Stoughton Porcupine Project"	2005 (68)	DD(1)(976m), SA	2.30657	KL-5502

Township	Company Name "Property Name"	Year (# refers to 2005 project)	Type of Work	AFRO Number	Resident Geologist Office File Designation
Marriott	Inmet Mining Corporation "McDiarmid Project"	2004	DD(1)(615m)	2.2905	KL-5412
Marriott	Plato Gold Corp.	2004-2005 (69)	Lc, M, IP	2.29405	KL-5430
Marriott	Tiger Gold Exploration Corporation "Lucky Mine Property"	2005 (70)	Lc, M, VLF-EM, GL	2.30262, 2.30355	KL-5478
McGarry	Consolidated PPM Development Corp.	2001	DD(2)(982m), SA		KL-5448
McGarry	Goldstake Explorations Inc. "McGarry Project"	2005 (71)	DD(11)(1729m), SA, Lc	2.30297	KL-5508
McGarry	Salo, A.J. "Foxearth Property"	2005 (72)	Pr, SA, DD(1)(152m)	2.30629, 2.30950	KL-5496, KL-5514
McNeil	OGL Ventures Inc. "Tom Fox-Weekley Gold Property"	2003	SA, GL, Gc	2.288	KL-5403
Michaud	Acrex Ventures Ltd. "Michaud Gold Property"	2003-2004	DD(29)(9844m), SA	2.30705, 2.30702	KL-5410, KL-5503
Michaud	Falconbridge Limited "3 Corners Property"	2004	DD(1)(293m)	2.30483	KL-5491
Michaud	Moneta Porcupine Mines Inc. "Golden Highway Project"	2003-2004	DD(6)(1795m), SA	2.29156, 2.29373	KL-5421, KL-5431
Michaud	Noranda Inc. "Moneta-Michaud Property"	2004	Lc, M, EM	2.29029	KL-5411
Michaud	Royal Victoria Minerals Ltd. "PJV Option"	2005 (73)	DD(2)(477m), SA	2.30189	KL-5473
Mickle	Canadian Prospecting Ventures Inc. "Silverclaim Property"	2004	sTr	2.28318	CO-3036
Morrisette	Gold Insight Resources Ltd. "Airport Property"	2005 (74)	DD(1)(124m), SA, Gc	2.30772, 2.30494	KL-5515
Morrisette	Kinbauri Gold Corp. "Morrisette Creek Property"	2005 (75)	Lc, IP	2.30247	KL-5475
Morrisette	O'Connor, T.A.	2005 (76)	sTr, SA	2.29579, 2.29778, 2.30166	KL-5442
Munro	Tom Exploration Inc. "Lalonde Gold Property"	2003	Lc, IP, M, VLF-EM	2.30214	KL-5477
North Williams	Lacarte, A.A.	2004	sTr	2.28652	CO-3037
Otto, Teck	Chartre, D & Dufresne, R.J. "Chartre-Dufresne 1999 Property"	2005 (77)	sTr	2.29852	KL-5455
Powell	Pinkerton, G.D. "Log Lake Project"	2004-2005 (78)	sTr, SA	2.29919	KL-5468
Sharpe	Grabowski, R.J.	2004	sTr	2.30597	KL-5497
Shillington	Golden Chalice Resources Inc. "Shillington Property"	2005 (79)	Lc, M, VLF-EM	2.30787	CO-3038
South Lorrain	Gilead Mineral Corporation "Veinlode Property"	2003	DD(2)(816m), SA	2.30508	CO-3039
South Lorrain	Gore, J.A.	2004	Pr	2.29454	CO-3040
Strathy	Wabana Explorations Inc. "NE Leckie Property"	1997-1998	DD(6)(857m), SA		CO-3041
Teck	Aurora-Larder Mining Corporation "Teck Property"	2005 (80)	SA, Pr	2.30349, 2.30815	KL-5506
Teck	Kirkland Lake Gold Inc.	2004	DD(6)(1619m), SA	2.29414	KL-5433
Teck	Marion, E.J. "Snowdump Property"	2005 (81)	DD(1)(33m)	2.29949	KL-5454

Township	Company Name "Property Name"	Year (# refers to 2005 project)	Type of Work	AFRO Number	Resident Geologist Office File Designation
Teck	O'Connor, T.A.	2005 (82)	PW, SA	2.30222	KL-5474
Truax	Roundell, H.D.	2003-2005 (83)	Pr	2.30122	CO-3042
Tyrrell	Clark, A.H.	2004	sTr, SA	2.28871	CO-3043
Tyrrell	Goldeye Explorations Limited "Tyrrell Property"	2003-2004	Lc, M, IP, sTr, PW, Gl., SA	2.29532, 2.29684	CO-3044, CO-3045
Tyrrell	Lake Superior Resources Corporation "Duncan/Mosher Lake Property"	2005 (84)	Lc, IP, M	2.29487	CO-3046,
Tyrrell	Pinkerton, G.D. "Cripple Lake Property"	2004	Pr, SA, sTr	2.28848	CO-3047
Tyrrell	Shining Tree Resources Ltd. "Porphyry Lake Project"	2004	DD(2)(115m), SA	2.28618	CO-3048
Tyrrell	Swain, S.L.	2004-2005 (85)	Lc, Pr, SA	2.29555, 2.30068, 2.30248	CO-3049
Walker	Cosby, M.S.	2004-2005 (86)	Lc, M, Gl., DD(2)(312m), SA	2.29453, 2.30545	KL-5445, KL-5520
Yarrow	Temex Resources Corp. "Yarrow Property"	2004-2005 (87)	Gc, IP, Lc, M	2.29971	KL-5456

Table 4. Exploration activity in the Kirkland Lake Regional Resident Geologist's District – 2005.

Abbreviations

AEM	Airborne electromagnetic survey	M	Ground magnetic survey
AM	Airborne magnetic survey	Met	Metallurgical testing
ARA	Airborne radiometric survey	OvD	Overburden drilling
Beep	Beep Mat survey	ODH	Overburden drill hole(s)
BS	Bulk sampling	PEM	Pulse electromagnetic survey
DD	Diamond drilling	Pr	Prospecting
DDH	Diamond drill hole(s)	R	Resistivity survey
DGP	Down-hole geophysics	SA	Sampling (other than bulk)
Gc	Geochemical survey	Seismic	Seismic survey
Gl.	Geological Survey	SP	Self-potential survey
GP	Ground Geophysics unspecified type	sTr	Stripping
Gv	Gravity survey	rTr	Trenching
HLEM	Horizontal loop electromagnetic survey	UG	Underground exploration/development
IP	Induced polarization survey	VLEM	Vertical loop electromagnetic survey
Lc	Linecutting	VLF-EM	Very low frequency electromagnetic survey

No	Company/Individual (Occurrence Name) or Property	Township/Area	Exploration Activity
1 - 87	See Table 3		
88	Kirkland Lake Minerals Inc.	Arnold	Gc
89	Mustang Minerals Corp. (Bannockburn Property)	Bannockburn	Bulk - flotation test
90	Apollo Gold Corp. (Black Fox Project)	Beatty, Hislop	DDH(30), SA
18	Golden Valley Mines Ltd. (Winnie Lake Grid)	Bernhardt, Teck	DDH (6) (632 m)

No	Company/Individual (Occurrence Name) or Property	Township/Area	Exploration Activity
91	Big Red Diamond Corporation	Black	SA
31	Bartarach, G.	Burt	sTr
92	Dianor Resources Inc.	Chamberlain, Pacaud	Lc
93	Randsburg International Gold Corp.	Chambers, Strathy	DD
94	Brigadier Gold Limited	Clifford	Soil Gas Hydrocarbon Soil Sampling, Lc, M, DD
95	Liberty Mines Inc. (former Liberty Mineral Exploration Inc.)	Dufferin	Gc
96	URSA Major Minerals Incorporated	Fawcett	DDH (8), SA
97	ValGold Resources Ltd.	Garrison	DDH (4) (~1 000 m), SA
98	Queenston Mining Inc. (Princeton Property)	Gauthier	DD, SA
99	Queenston Mining Inc. (Upper Beaver)	Gauthier	DD, SA
51	Brigadier Gold Ltd. (Larder Lake Diamond Project)	Gauthier, Hearst, McElroy, McVittie	DD
100	Rapski J.	Gross	sTr, SA
101	Plato Gold Corp.	Guibord	DD
102	Brigadier Gold Limited (M-Island Gold Project)	Hearst	SA
103	Adroit Resources Inc.	Hebert and Burnaby	Pr, Gc, SA
104	Newmont Mining Corporation (Blacktop)	Holloway	DD
105	Newstrike Resources Ltd. (Cunningham Property)	Holmes	DD (6) (2158 m), SA
60	Sage Gold Inc.	Kerrs	DDH (7) (3000 m), Gc, M
105	Dianor Resources Inc.	Klock	AM, OvD, M, SA, Pr
106	LaCarte, A.A. (Bear River)	Lawson	sTr, SA
107	Placer Dome Inc. (Vault Option)	Lebel	rTr, SA, Lc
108	International KRL Resources Corp. (Copper Hill Project)	Macmurchy	DDH (1) (351 m), Pr, GL, SA
109	Stonebridge Resources Explorations Ltd.	Masonville	DD
69	Plato Gold Corp.	Marriott	DD
110	Consolidated Global Diamond Corp.	McGarry	DD, SA
111	D'Arianne Resources Inc.	McGarry, McFadden	SA
112	NFX Gold Inc. & Maximus Ventures Ltd.	McGarry, McVittie	DD(~3000 m), SA
113	Brigadier Gold Limited (Forbes Gold Prospect)	McVittie	DD
114	Acrex Ventures Ltd. and Moneta Porcupine Mines Inc. (55 Zone)	Michaud	DD(6)(2142m), SA
115	LaCarte, A.A. (Ireland)	North Williams	sTr, SA
116	Pacific Comox Resources Ltd.	Powell	DDH (12) (3570 feet), SA
117	Tres-Or Resources Ltd. and Arctic Star Diamond Corp.	Sharpe	DD, SA, Lc, Pr
79	Golden Chalice Resources Inc.	Shillington	DD

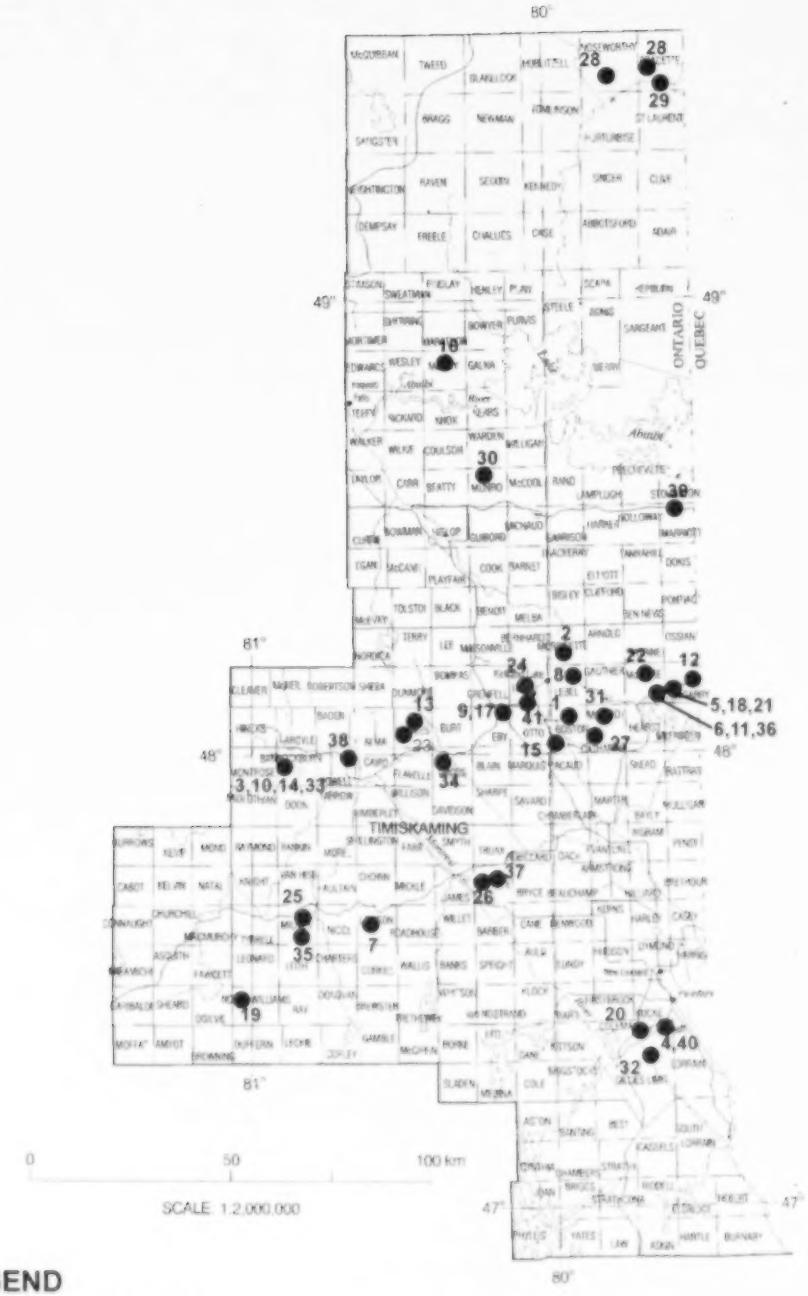
No	Company/Individual (Occurrence Name) or Property	Township/Area	Exploration Activity
68	Harte Gold Corp. and Newmont Mining Corp.	Stoughton, Marriott	DDH(58/418L m), SA
118	Dianor Resources Inc.	Teck	OvD, KIM
119	GLR Resources Inc.	Teck	DDH (8), SA
120	Kirkland Lake Gold Inc.	Teck	DD, SA
121	Queenston Mining Inc. (Amalgamated Kirkland)	Teck	DD, SA
122	Queenston Mining Inc. and Kirkland Lake Gold Inc. (Kirkland Lake West Project)	Teck	DDH (7) (3555 m), SA, IP
123	Vault Minerals Inc. (Kirkland Hudson Bay)	Teck	DD, SA, RE
124	Wooling	Teck	sTr, SA
125	Goldeye Explorations Limited	Tyrrell	IP, DD, SA, sTr

Table 5. Property visits conducted by the Kirkland Lake Regional Resident Geologist and staff in 2005 (see Figure 3).

Number (keyed to Figure 2)	Property/Occurrence (MDI Number)
1	Adams, Boston Tp. (MDI32D04SW00013)
2	Airport, Morrisette Tp. (N/A)
3	"B" Zone, Bannockburn Tp. (NEW)
4	Bailey, Coleman Tp. (MDI31M05NE00002)
5	Barber Larder, McGarry Tp. (MDI32D04SE00043)
6	Bear Lake, McVittie Tp. (MDI32D04SE00067)
7	Bear River, Lawson Tp. (NEW)
8	Bidgood, Lebel Tp. (MDI32D04SW00073)
9	Boudreault, G., Eby Tp. (N/A)
10	"C" Zone, Bannockburn Tp. (NEW)[1]
11	Cheminis, McVittie Tp. (MDI32D04SE00019)[1]
12	Consolidated Global Diamond Corp., McGarry Tp. (N/A)
13	Cunningham, L., Holmes Tp. (N/A)
14	"D" Zone, Bannockburn Tp. (NEW)
15	Dufresne, R., Otto Tp. (N/A)
16	Goldbelt, Moody Tp. (N/A)
17	Harrington, Eby Tp. (MDI42A01SE00142)[1]
18	Harris, McGarry Tp. (NEW)
19	Ireland, North Williams Tp. (NEW)[1]
20	Karn, D., Coleman Tp. (N/A)
21	Kerr, McGarry Tp. (MDI32D04SE00011)
22	KIR-VIT, McVittie Tp. (MDI32D04SE00039)
23	Loki "D", Holmes Tp. (MDI42A02SE00035)
24	Macassa, Teck Tp. (MDI42A01SE00052)
25	Mann, Milner Tp. (MDI41P10SW00004)
26	Merico, Tudhope Tp. (MDI41P09NW00050)
27	Mondoux, McElroy Tp. (MDI32D04SW00251)
28	Newmont, Bradette and Noseworthy tps. (N/A)
29	Noranda, Bradette Tp. (N/A)

Number (keyed to Figure 2)	Property/Occurrence (MDI Number)
30	Potterdoal, Munro Tp. (MDI42A09SE00013)[1]
31	Poupore, T., McElroy Tp. (N/A)
32	Professor, Gillies Limit Tp. (MDI31M05SE00017)
33	Rahn Lake, Bannockburn Tp. (MDI41P15NW00015)
34	Rapski, J., Gross Tp. (NEW)
35	Reeve-Dobie, Milner Tp. (MDI41P10SW00005)
36	Sarcee, McVittie Tp. (MDI32D04SE00077)
37	Sauve, Tudhope Tp. (MDI41P16SE00011)
38	Stanley, Powell Tp. (MDI41P15NE00062)
39	STAZ, Marriott Tp. (MDI32D12SE00014)
40	University, Coleman Tp. (MDI31M05SE00015)
41	Wooling, G., Teck Tp. (NEW)

[1] Described in "Property Examinations" section, this report.
NEW – MDI number to be created.
N/A – Does not meet the minimum requirements for an MDI.



LEGEND

● Property Visit - see Table 5.

Figure 3. Property visits in the Kirkland Lake District – 2005.

Table 6. Publications received by the Kirkland Lake Regional Resident Geologist's Office in 2005.

Title	Author	Type and Year of Publication
Report of Activities 2004, Resident Geologist Program, Timmins Regional Resident Geologist Report: Timmins and Sault Ste. Marie Districts	Atkinson, B.T., Harlstone, M., Seiro, G.Wm., Wilson, A.C., Draper, D.M., Bulman, V.J. and Pace, A.	Ontario Geological Survey, Open File Report 6149, 2005, 93p. (106149)
Geological compilation of the central Abitibi greenstone belt: Kapuskasing Structural Zone to the Quebec border	Ayer, J.A., Berger, B.R., Hall, L.A.F., Houlé, M.G., Johns, G.W., Josey, S., Madon, Z., Rainsford, D., Trowell, N.F. and Vaillancourt, C.	Ontario Geological Survey, Preliminary Map P.3565, scale 1:250 000, 2005 (403565)
Overview of results from the Greenstone Architecture Project: Discover Abitibi Initiative	Ayer, J.A., Thurston, P.C., Bateman, R., Dubé, B., Gibson, H.L., Hamilton, M.A., Hathway, B., Hocker, S.M., Houlé, M.G., Hudak, G., Ispolatov, V.O., Lafrance, B., Lesher, C.M., MacDonald, P.J., Péloquin, A.S., Piercey, S.J., Reed, L.E. and Thompson, P.H.	Ontario Geological Survey, Open File Report 6154, 2005, 146p. (106154)
Summary of field work and other activities 2005	Baker, C.L., Debicki, E.J., Kelly, R.I., Ayer, J.A., Easton, R.M. and Madon, Z.B. (Eds.)	Ontario Geological Survey, Open File Report 6172, 2005 (106172)
Lithogeochemical exploration for komatiite-associated Ni-sulfide deposits: strategies and limitations	Barnes, S.J., Hill, R.E.T., Perring, C.S. and Dowling, S.E.	Mineralogy and Petrology, v 82, p 259-293, 2004 (15274)
Geology and PGE mineralization of the Folson Lake Property, East Bull Lake Intrusion, Sudbury District, Ontario	Barrie, C.T., Lariviere, J.M. and Fekete, M.	Laurentian University SEG Student Chapter short course notes, Sudbury, Ontario, 2000, 15p. (15273)
The Timmins–Porcupine gold camp, northern Ontario: the anatomy of an Archean greenstone belt and its gold mineralization' Discover Abitibi Initiative	Bateman, R., Ayer, J.A., Dubé, B. and Hamilton, M.A.	Ontario Geological Survey, Open File Report 6158, 2005, 90p. (106158)
Gold in till: preliminary results from the Matheson area, Ontario	Bloom, L.B. and Steele, K.G.	in Drift Prospecting, ed. R.N.W. DiLabio and W.B. Coker, Geological Survey of Canada, Paper 89-20, p. 61-70, 1989 (15266)
Solving the Wawa diamond enigma	Buckle, J.	Unknown source, 6p. (15268)
Using corroborative evidence in the exploration for diamond deposits	Buckle, J.	Unknown source, 9p. (15270)
Report of Activities 2004, Resident Geologist Program, Kirkland Lake Regional Resident Geologist Report: Sudbury District	Cosec, M., Farrow, D. and Gaudreau, J.M.	Ontario Geological Survey, Open File Report 6151, 2005, 41p. (106151)
Report of Activities 2004, Resident Geologist Program, Regional Land Use Geologist Report: Northwestern, Northeastern and Southern Ontario Regions	Debicki, R.L., Drost, A.P., Lichtblau, A.F., Fraser, R.J. and Rowell, D.J.	Ontario Geological Survey, Open File Report 6153, 2005, 37p. (106153)
Mid-Continental Diamonds	Dunne K.P.E. and Grant B.	GAC–MAC Symposium Volume, Edmonton, Alberta, May 17 to 18, 1993 (148045)
Eabametoong First Nation glossary of geological and mining-related terms	Eabametoong First Nation and Ontario Geological Survey	Ontario Geological Survey, Miscellaneous Paper 170, 2004, 81p. (102170)
Geology, petrology and geochemistry of the Potterdoal Cu-Zn deposit, Kidd-Munro Assemblage, Munro Township, Ontario	Epp, M.S.	unpublished MSc thesis, McMaster University, 1997, 143p. (120087)
VIIIth International Kimberlite Conference - Northern Ontario Field Trip Guidebook	Geological Survey of Canada	Guidebook prepared for the VIIIth International Kimberlite Conference, June 29 - July 5, 2003, ed. B.A. Kjarsgaard, 2003 (149047)
Sampling lamprophyre dikes for diamonds: Discover Abitibi Initiative	Grabowski, G.P.B. and Wilson, A.C.	Ontario Geological Survey, Open File Report 6170, 2005, 262p. (106170)
Regional modern alluvium sampling of the Kirkland Lake–Matachewan area, northeastern Ontario	Gundon, D.L. and Reid, J.L.	Ontario Geological Survey, Open File Report 6124, 2005, 121p. (106124)

Title	Author	Type and Year of Publication
Geology and wine 2: A geological foundation for terroirs and potential sub-appelations of Niagara Peninsula wines, Ontario, Canada	Haynes, S.J.	Geoscience Canada, v.27, no.2, p.67-87, 2000 (15267)
Volcanic stratigraphy and controls on mineralization in the Genex Mine area, Kamiskotia area: Discover Abitibi Initiative	Hocker, S.M., Thurston, P.C. and Gibson, H.L.	Ontario Geological Survey, Open File Report 6156, 2005, 143p. (106156)
Geology, structure, and gold mineralization, Kirkland Lake and Larder Lake areas (Gauthier and Teck townships): Discover Abitibi Initiative	Ispolatov, V., Lafrance, B., Dubé, B., Hamilton, M. and Creaser, R.	Ontario Geological Survey, Open File Report 6159, 2005, 170p. (106159)
Precambrian geology of Teck Township transect	Ispolatov, V.O.	Ontario Geological Survey, Preliminary Map P.3558, scale 1:10 000, 2005 (403558)
Report of Activities 2004, Resident Geologist Program, Red Lake Regional Resident Geologist Report: Red Lake and Kenora Districts	Lichtblau, A., Hinz, P., Ravnaas, C., Storey, C.C., Kosloski, L., Raoul, A. and Gula, R.	Ontario Geological Survey, Open File Report 6146, 2005, 97p. (106146)
An integrated study of intrusive rocks spatially associated with gold and base metal mineralization in the Abitibi greenstone belt, Timmins area and Clifford Township: Discover Abitibi Initiative	MacDonald, P.J., Piercey, S.J. and Hamilton, M.A.	Ontario Geological Survey, Open File Report 6160, 2005, 190p. (106160)
Report of Activities 2004, Resident Geologist Program, Kirkland Lake Regional Resident Geologist Report: Kirkland Lake District	Meyer, G., Grabowski, G.P.B., Guindon, D.L. and Chaloux E.C.	Ontario Geological Survey, Open File Report 6150, 2005, 56p. (106150)
Integrated 3D geoscientific deposit modelling: Queenston Mining Inc. - Anoki and McBean deposits	Mineral Exploration Research Centre and Mining Innovation, Rehabilitation and Applied Research Corporation	Ontario Geological Survey, Preliminary Map P.3566, 2005 (403566)
Integrated 3D geoscientific deposit modelling: St Andrew Goldfields Inc. - Stock Mine and Clavos Deposit	Mineral Exploration Research Centre and Mining Innovation, Rehabilitation and Applied Research Corporation	Ontario Geological Survey, Preliminary Map P.3567, 2005 (403567)
Integrated 3D geoscientific deposit modelling: Kirkland Lake Gold Inc. - Macassa Mine	Mineral Exploration Research Centre and Mining Innovation, Rehabilitation and Applied Research Corporation	Ontario Geological Survey, Preliminary Map P.3568, 2005 (403568)
Integrated 3D geoscientific deposit modelling: Porcupine Joint Venture - Dome, Tisdale and Pamour Mines	Mineral Exploration Research Centre and Mining Innovation, Rehabilitation and Applied Research Corporation	Ontario Geological Survey, Preliminary Map P.3569, 2005 (403569)
Integrated 3D geoscientific deposit modelling: Falconbridge Ltd. - Kidd Creek Mine	Mineral Exploration Research Centre and Mining Innovation, Rehabilitation and Applied Research Corporation	Ontario Geological Survey, Preliminary Map P.3570, 2005 (403570)
Integrated 3D geoscientific deposit modelling: Millstream Mines Ltd. - Potter Mine	Mineral Exploration Research Centre and Mining Innovation, Rehabilitation and Applied Research Corporation	Ontario Geological Survey, Preliminary Map P.3571, 2005 (403571)
Integrated 3D geoscientific deposit modelling: Queenston Mining Inc. - Upper Canada Mine	Mineral Exploration Research Centre and Mining Innovation, Rehabilitation and Applied Research Corporation	Ontario Geological Survey, Preliminary Map P.3572, 2005 (403572)
Integrated 3D geoscientific deposit modelling: Newmont Mining Corp. - Holt-McDermott Mine	Mineral Exploration Research Centre and Mining Innovation, Rehabilitation and Applied Research Corporation	Ontario Geological Survey, Preliminary Map P.3573, 2005 (403573)
Integrated 3D geoscientific deposit modelling: Newmont Mining Corp. - Harker-Holloway Mine	Mineral Exploration Research Centre and Mining Innovation, Rehabilitation and Applied Research Corporation	Ontario Geological Survey, Preliminary Map P.3574, 2005 (403574)
Integrated 3D geoscientific deposit modelling: Kirkland Lake Gold Inc. - Teck-Hughes, Wright-Hargreaves and Lakeshore Mines	Mineral Exploration Research Centre and Mining Innovation, Rehabilitation and Applied Research Corporation	Ontario Geological Survey, Preliminary Map P.3575, 2005 (403575)
The application of MMI geochemistry for diamond exploration	MMI Technology	www.mmigeochem.com, 2003 (15271)
Soil geochemistry anomalies using selective leaching methods at the Stock Mine East Zone and the Shoot Zone gold deposits	Nadeau, S. and Jensen, K.	St Andrew Goldfields Ltd. (15272)

Title	Author	Type and Year of Publication
Airborne magnetic and electromagnetic surveys, reprocessed SPECTREM$_{2000}$ data: residual magnetic field and reinterpreted EM anomalies, Matheson area	Ontario Geological Survey	Ontario Geolgical Survey, Map 81 954, scale 1:50 000, 2005 (481954)
Airborne magnetic and EM surveys, reprocessed SPECTREM$_{2000}$ data: overburden thickness isopach (from EM data) and reinterpreted EM anomalies, Matheson	Ontario Geological Survey	Ontario Geological Survey, Map 81 955, scale 1:50 000, 2005 (481955)
Airborne magnetic and electromagnetic surveys, reprocessed SPECTREM$_{2000}$ data: original and reinterpreted electromagnetic anomalies, Matheson area	Ontario Geological Survey	Ontario Geological Survey, Map 81 956, scale 1:50 000, 2005 (481956)
Airborne magnetic and electromagnetic surveys, reprocessed SPECTREM$_{2000}$ data: Z-component channel 2 and reinterpreted EM anomalies, Matheson area	Ontario Geological Survey	Ontario Geological Survey, Map 81 957, scale 1:50 000, 2005 (481957)
Airborne magnetic and electromagnetic surveys, reprocessed SPECTREM$_{2000}$ data: adaptive X-component decay and reinterpreted EM anomalies, Matheson area	Ontario Geological Survey	Ontario Geological Survey, Map 81 958, scale 1:50 000, 2005 (481958)
Surficial geology of the North Timmins region	Ontario Geological Survey	Ontario Geological Survey, Map P.3564, scale 1:100 000, 2005 (403564)
Geology and base metal mineralization in Ben Nevis, Clifford and Katrine townships: Discover Abitibi Initiative	Péloquin, A.S. and Piercey, S.J.	Ontario Geological Survey, Open File Report 6161, 2005, 86p. (106161)
Geology of the Kidd–Munro assemblage in Munro Township, and the Tisdale and Lower Blake River assemblages in Currie Township: Discover Abitibi Initiative	Péloquin, A.S., Houlé, M.G. and Gibson, H.L.	Ontario Geological Survey, Open File Report 6157, 2005, 94p. (106157)
Precambrian geology of Munro Township	Péloquin, A.S., Houlé, M.G. and Gibson, H.L.	Ontario Geological Survey, Preliminary Map P.3557, scale 1:10 000, 2005 (403557)
Precambrian geology, Otto and Eby townships	Pigeon, L. and Berger, B.R.	Ontario Geological Survey, Preliminary Map P.3534, scale 1:20 000, 2004 (403534)
Airborne magnetic survey, residual magnetic field, Abitibi greenstone belt compilation	Rainsford, D.	Ontario Geological Survey, Map 81 952, scale 1:250 000, 2005 (481952)
Airborne magnetic survey, shaded magnetic relief, Abitibi greenstone belt compilation	Rainsford, D.	Ontario Geological Survey, Map 81953, scale 1:250 000, 2005 (481953)
Gravity and magnetic three-dimensional (3D) modelling: Discover Abitibi Initiative	Reed, L.E.	Ontario Geological Survey, Open File Report 6163, 2005, 40p. (106163)
Two-dimensional (2D) reflection seismic surveying in the Timmins-Kirkland Lake area, northern Ontario; acquisition, processing, interpretation	Reed, L.E., Snyder, D.B. and Salisbury, M.H.	Ontario Geological Survey, Open File Report 6169, 2005, 96p. (106169)
Report of Activities 2004, Resident Geologist Program, Southern Ontario Regional Resident Geologist Report: Southeastern and Southwestern Ontario Districts, Mines and Minerals Information Centre and Petroleum Resources Centre	Sangster, P.J., Papertzian, V.C., Steele, K.G., Lee, C.R., Barua, M., Laidlaw, D.A. and Carter, T.R.	Ontario Geological Survey, Open File Report 6152, 2005, 77p. (106152)
Report of Activities 2004, Resident Geologist Program, Thunder Bay South Regional Resident Geologist Report: Thunder Bay South District	Schnieders, B.R., Scott, J.F., Magee, M.A., Muir, J.L. and Komar, C.	Ontario Geological Survey, Open File Report 6148, 2005, 46p. (106148)
A guide to the recognition and significance of kimberlite indicator minerals	Schulze, D.J.	reprinted from Kimerlites and their indicator minerals: A hands-on short course, by D.J. Schulze and T.E. McCandless, GeoCanada 2000 Short Course No. 12, Calgary, Alberta, 2000, 37p. (15269)

Title	Author	Type and Year of Publication
Report of Activities 2004, Resident Geologist Program, Thunder Bay North Regional Resident Geologist Report: Thunder Bay North District	Smyk, M.C., White, G.D., Magee, M.A. and Komar, C.	Ontario Geological Survey, Open File Report 6147, 2005, 37p. (106147)
Models of glacial stratigraphy determined from drill core, Matheson area, northeastern Ontario	Steele, K.G., Baker, C.L. and McClenaghan, M.B.	in Drift Prospecting, ed. R.N.W. DiLabio and W.B. Coker, Geological Survey of Canada, Paper 89-20, p.127-138, 1989 (15265)
A new metamorphic framework for gold exploration in the Timmins–Kirkland Lake area, western Abitibi greenstone belt: Discover Abitibi Initiative	Thompson, P.H.	Ontario Geological Survey, Open File Report 6162, 2005, 104p. (106162)
Descriptions of modelling and coordinate system conventions for the Integrated Three-Dimentional (3D) Deposit Modelling project: Discover Abitibi Initiative	Thurston, P.C., Cotesta, L., Hawson, C.A. and Vasak, P.	Ontario Geological Survey, Open File Report 6168, 2005, 84p. (106168)
Ice movements, till sheets and glacial transport in Abitibi-Timiskaming, Quebec and Ontario	Veillette, J.J.	in Drift Prospecting, ed. R.N.W. DiLabio and W.B. Coker, Geological Survey of Canada, Paper 89-20, p.139-154, 1989 (15264)
Geology of the Slate Falls area, District of Kenora (Patricia Portion)	Wallace, H.	Ontario Geological Survey, Report 232, 1985, 85p. (101232)

Table 7. Mineral deposits not being mined in the Kirkland Lake Regional Resident Geologist District in 2005.

Abbreviations

AF.....Assessment Files
CMH.....Canadian Mines Handbook
GR.....Geological Report
MD&A.....Management Discussion & Analysis
MDC.....Mineral Deposit Circular
MDIR.....Mineral Deposit Inventory record
MLS.....Mining Lands, Sudbury
MR.....Mining Recorder
NM.....The Northern Miner
OFR.....Open File Report
PC.....Personal Communication

Deposit Name (Township)	Commodity/ MDI No.	Tonnage-Grade Estimates and/or Dimensions	Ownership References	Reserve References	Status
180 East (Lebel)	Au 32D04SW00336	Measured + indicated 326 700 t @ 4.1 g/t Au	Queenston Mining Inc. (CMH 2004-2005, p.353-354)	CMH 2004-2005, p.353-354	Inactive
Adams Mine (Boston, Lebel)	Fe 32D04SW00013	12 years open pit reserves at time of mine closure.	N/A	N/A	Inactive
Ajax (Strathy)	Cu, Ni, Au, Ag, PGE 31M04SW00022	Drill proven + indicated resource 2 062 505 tons of 0.412% Cu, 0.257% Ni	Northern Platinum Ltd. (55%) (CMH 2004-2005, p. 318-319)	CMH 2004-2005, p. 318-319	Inactive
Amalgamated Kirkland (Teck)	Au 42A01NE00184	Inferred 2 639 338 t @ 4.5 g/t Au	Queenston Mining Inc. (CMH 2004-2005, p.353-354)	CMH 2004-2005, p.353-354	Active
Anoki (Gauthier)	Au 32D04SW00069	Measured + indicated Resource 522 300 t @ 5.7 g/t Au Inferred Resource 35 800 t @ 5.7 g/t Au Anoki South Inferred Resource 106 000 t @ 6.5 g/t Au	Queenston Mining Inc. (CMH 2004-2005, p.353-354)	CMH 2004-2005, p.353-354	Active

Deposit Name (Township)	Commodity/ MDI No.	Tonnage-Grade Estimates and/or Dimensions	Ownership References	Reserve References	Status
Armistice (McGarry)	Au 32D04SE00013	Indicated Mineral Resource of 433 981 tons @ 0.250 ounce/ton Au	Armistice Resources Ltd. (75%) – Sheldon-Larder Mines Limited (Armistice Resources Ltd MD&A November 28, 2005)	Armistice Technical Report June 6, 2004	Inctive
Barber Larder (McGarry)	Au 32D04SE00043	60 000 tons of 0.16 oz per ton Au	NFX Gold Inc. (75%) (CMH 2004-2005, p.308)	CMH 1990-91, p.338	Active
Black Fox Project (Hislop, Beatty)	Au 42A09SW00165	Mineable Reserves 778 000 t @ 8.91 g/t Resource 1.2 million t @ 5.36 g/t Au	Apollo Gold Corporation (CMH 2004-2005, p.47)	Apollo Gold Corporation website 2002	Active
Blue Quartz (Beatty)	Au 42A09SW00130	109 000 tons of 0.484 oz per ton Au	Thundermin Resources Ltd. (50%) (CMH 2003-2004, p.491)	NM, March 20, 1980	Inactive
Boston Creek (Pacaud)	Au 31M13NW00053	330 000 tonnes of 4.2 g/T Au	Atapa Minerals Limited (50%) (CMH 2003-2004, p.54)	CMH 1998-99, p.52	Inactive
Buffonta (Garrison)	Au 32D05NW00009	400 000 tons of 0.15 oz per ton Au	Gwen Resources Ltd. (60%) - AJ Perron Gold Corporation (40%)(CMH 1996-97, p.26)	CMH 1997-98, p.221	Inactive
Cheminis (McVittie)	Au 32D04SE00019	Measured + indicated 1 619 082 tons @ 0.18 ounce/ ton Au. 924 275 t @ 0.19 ounce/ton Au inferred	NFX Gold Inc. (CMH 2004-2005, p.308)	NFX Gold Inc. Press Release January 8, 2004	Active
Clenor (Strathy)	Au, Ag 31M04SW00088	24 000 tons of 0.21 oz per ton Au, 1.8 oz per ton Ag	Gwen Resources Ltd. (CMH 1997-98, p.220)	GR 163	Inactive
Commodore (Lebel)	Au 32D04SW00039	738 000 tons of 0.07 oz per ton Au inferred with a higher grade zone of 307 000 tons of 0.11 oz Au per ton inferred	H.Egg, AF (Sudbury Contact Mines Limited AF KL-4447)	AF KL-4447	Inactive
Creek Zone (Hislop)	Au 42A08NW00142	Indicated Resource: Creek – 425 897 t @ 6.33 g/t Au Main – 57 634 t @ 8.72 g/t Au Inferred Resource: Above 225 m 155 720 t @ 5.05 g/t Au Below 225 m 212 012 t @ 6.53 g/t Au	Stroud Resources Ltd. (CMH 2004-2005, p.402-403)	Stroud Resources Ltd. Press release January 12, 2005	Inactive
Diadem (Strathcona)	Cu, Ni 31M04SW00077	450 000 tons of 0.5% Cu, 0.1% Ni to 400 feet	Temex Resources Corp. (CMH 2003-2004, p.486)	MDIR N 0045	Inactive
Duggan Zone (Knight)	Au 41P11NE000023	1 114 000 tons of 0.07 oz per ton Au	Rosko, P	George Cross Newsletter Ltd., No 39, February 25, 1997	Inactive

Deposit Name (Township)	Commodity/ MDI No.	Tonnage-Grade Estimates and/or Dimensions	Ownership References	Reserve References	Status
Eastmaque (Teck)	Au 42A01NE00043	2 132 500 tons of tailings of 0.035 oz per ton Au	Hecla Mining Company (Eastmaque to Equinox Resources Ltd to Hecla in 1994) (CMH 1996-97, p.207-208)	CMH 1991-92, p.142	Inactive
Fenn-Gib (Guibord)	Au 42A09SE00054 42A09SE00187	1.95 million t of 5.13 g/t Au above 250 m level	Barrick Gold Corp. (CMH 2000-2001, p.312)	CMH 2000-2001, p.312	Inactive
Fort Knox (Fawcett, Ogilvie, North Williams)	Cu, Ni 41P11SE00074	Indicated Resource: 1 020 000 t @ 0.71% Ni, 0.36% Cu , 0.02% Co Inferred Resource: 1 490 000 t @ 0.67% Ni, 0.36% Cu, 0.03% Co	URSA Major Minerals Incorporated (URSA Major Minerals Incorporated press release August 24, 2005)	URSA Major Minerals Incorporated press release February 2, 2006	Active
Garrison (Garrison)	Au 32D12SW00004 32D12SW00042 32D12SW00044 32D12SW00050 32D12SW00051	1 050 200 tons of 0.18 oz per ton Au 166 800 tons of 0.16 oz per ton Au 102 800 tons of 0.18 oz per ton Au	ValGold Resources Ltd. (ValGold Resources Ltd. press release June 30, 2005)	ValGold Resources Ltd. press release June 30, 2005	Active
Golden Harker (Harker, Holloway)	Au 32D05NW00159	500 000 tons of 0.16 oz per ton Au	Golden Harker Explorations Limited (CMH 2004-2005, p.197)	NM, March 7, 1988	Inactive
Gordon Lake (Tyrrell)	Au 41P10NW00006	225 000 tons of 0.20 oz per ton Au to 750 feet	Duncan Gold Resources Inc. – Dalhousie Oil Company Ltd. (AF)	AF	Inactive
Iris (Harker)	Au, W 32D05NW00021	769 756 tons of 0.07 oz per ton Au	The Alberta Gold Corporation (55%) – Perrex Resources Inc. (45%) (CMH 1995-96 p.289)	AF KL-3170	Inactive
Juby (Tyrrell)	Au 41P10SW00013	Indicated Resources – 4.46 million t @ 2.20 g/t Au Inferred Resource – 1.84 million t @ 2.03 g/t Au	Temex Resource Corp (Press Release February 16, 2005)	Temex Resources Corp press release February 16, 2005	Active
LaCarte (Tyrrell)	Au 41P11NE00024	600 000 t @ 6 g/t Au	Goldeye Explorations Ltd. (CMH 2004-2005, p.201)	Goldeye Explorations Ltd. Press Release November 05, 2002	Active
Leckie (Strathy)	Au 31M04SW00090	405 000 tons of 0.2 oz per ton Au	Stroud Resources Ltd. (CMH 2004-2005, p.402-403)	CMH 2000-2001, p.372	Inactive
Ludgate (Michaud, Guibord, Garrison)	Au 42A08NE00159	462 000 tonnes of 5.91 g/t Au	St Andrew Goldfields Ltd. (50%) – Coniagas Resources Limited (40%) – Kinross Gold Corporation (10%) (Coniagas Resources Limted MD&A May 24, 2005)	TNM February 1, 1999 p. 2.	Inactive

Deposit Name (Township)	Commodity/ MDI No.	Tonnage-Grade Estimates and/or Dimensions	Ownership References	Reserve References	Status
Martin-Bird (Hearst)	Au 32D04SE00143	558 000 tons of 0.114 oz per ton Au	Barrick Gold Corporation (AF KL-3752)	AF KL-3752	Inactive
Matachewan & Young-Davidson (Cairo, Powell, Yarrow)	Au 41P15NE00014 41P15NE00017	Open Pit: Measured and Indicated Resource 7 508 900 tons @ 0.062 oz/ton Au Inferred Resource - 363 400 tons @ 0.039 oz/ton Au Underground : Inferred Resource - 8 600 800 tons @ 0.118 oz/ton Au	Northgate Minerals Corporation (Northgate Minerals Corporation press release September 14, 2005)	Northgate Minerals Corporation press release September 14, 2005	Active
McBean (Gauthier)	Au 32D04SW00060	Measured + Indicated Resource: 835 520 t @ 5.1 g/t Inferred: 1 835 230 t @ 6.5 g/t	Queenston Mining Inc. (CMH 2004-2005, p.353-354)	CMH 2004-2005, p.353-354	Active
Omega (McVittie)	Au 32D04SE00017	720 854 tons of 0.16 oz per ton Au	GLR Resources Inc. (CMH 2004-2005, p.189)	CMH 2004-2005, p.189	Inactive
Potter (Munro)	Cu, Zn, Ag, Au, Co 42A09SE00015	Not available	Millstream Mines Ltd. (CMH 2004-2005, p.287)		Active
Ramp Property (Beatty, Carr, Coulson, Wilkie)	Au 42A09SW00133	813 414 tons of 0.235 ounce per ton Au	Globex Mining Enterprises Inc. (Vedron Gold Inc. earning 50%)(CMH 2004-2005, p.188-189)	Globex Mining Enterprises Inc. website 2002	Active
Ross (Hislop)	Au 42A08NW00005	1 055 000 tons of 0.125 oz per ton Au	Preston Electrical and Mechanical Ltd. (sold by Giant Yellowknife Mines Limited in 1989 CMH 1990-91, p.188)	CMH 1989-90, p.188	Inactive
Sherman Mine (Chambers, Strathcona, Strathy)	Fe 31M04SW00025	5 years open pit reserves at time of mine closure. Underground resources unknown.	N/A	Northern Daily News, March 7, 1989	Inactive
Southwest Zone (Michaud)	Au 42A08NE00038	3.2 million t avg. 5.98 g/t Au	Moneta Porcupine Mines Inc. (CMH 2002-2003, p.280)	Acrex Ventures press release April 22, 2004	Active
Taylor (Taylor)	Au 42A10SE00066 42A10SE00065	West Porphyry – Indicated 735 000 t @ 9.5 g/t Au, Inferred 631 000 t @ 9.9 g/t Au Shoot – Indicated 670 000 t @ 5.5 g/t Au, Inferred 106 000t @ 5.2 g/t Au	St Andrew Goldfields Ltd. (CMH 2004-2005, p.371-372)	St Andrew Goldfields Ltd. press release November 26, 2003	Active
Teck Hughes (Teck)	Au 42A01NE00020	375 000 tons of 0.2 oz per ton Au	Kirkland Lake Gold Inc. (CMH 2003-2004, p.289)	CMH 1991-92, p.270	Active
Temagami Copper (Phyllis)	Cu, Ni 41I16NE00004	770 000 tons of 1.04% Cu, 0.46% Ni	N/A	AF	Inactive

Deposit Name (Township)	Commodity/ MDI No.	Tonnage-Grade Estimates and/or Dimensions	Ownership References	Reserve References	Status
Tyranite (Tyrrell, Knight)	Au 41P11NE00013	567 000 tons of 0.18 oz per ton Au	Mill City International Inc. (50%) – Tyranex Gold Inc. (CMH 2003-2004, p.326)	NM 06/93	Inactive
Upper Beaver (Gauthier)	Au, Cu 32D04SW00068	Indicated Resource: 181 437 t of 7.9 g/t Au, 1.2% Cu	Queenston Mining Inc. (CMH 2004-2005, p.353-354)	CMH 2004-2005, p.353-354	Active
Upper Canada (Gauthier)	Au 32D04SW00057	Measured + Indicated Resource: 1 899 973 t @ 6.9 g/t Au	Queenston Mining Inc. (CMH 2004-2005, p.353-354)	CMH 2004-2005, p.353-354	Inactive
Victoria Creek (Gauthier)	Au 32D04NW00043	4 958 000 t of 3.43 g/t Au	Sudbury Contact Mines Limited (CMH 2002-2003, p.398)	CMH 1998-99, p.429	Inactive

Table 8. Summary of activities of the Kirkland Lake Regional Resident Geologist's Office – 2005.

Activity	Number
Office Visits	2213
Telephone Inquiries	1369
Properties Visited	41
Field Trips Attended	3
Field Trips Given	4
Talks Given	3
Assessment Files and Donations Processed	229
Titles Added to Library Database	62
Drill Holes Added to Drill Core Library	0
MDI Records Updated	3
MDI Records Deleted	0
MDI Records Added	0
MDI Records Deepened	0

Table 9. Gold production in the Kirkland Lake Regional Resident Geologist's District – 2005.

Mine	Township	Tons Milled	Production (oz. Au)	Grade (oz./T)	Years of Production
Aljo	Beatty	2,333	42	0.018	1940
American Eagle	Munro	60	40	0.667	1911
Argyll	Beatty	12,455	851	0.068	1918
Armistice	McGarry	8,282	1,035	0.125	1995, 97 (bulk samples)
Ashley	Bannockburn	157,076	50,123	0.319	1932-36
Barber Larder	McGarry	30,118	3,072	0.102	1988
Barry Hollinger	Pacuad	267,741	77,000	0.288	1918,25-36,44-46
Bidgood	Lebel	586,367	160,184	0.273	1934-51
Blue Quartz	Beatty	500	81	0.162	1923,26,28,34
Bourkes	Benoit	1,298	277	0.213	1918,36-38
Buffonta	Garrison	117,013	12,139	0.104	1981,91-92
Canadian Arrow	Hislop	279,593	17,045	0.061	1980-83
Canamax (Matheson Project)	Holloway	38,675	5,391	0.139	1988
Cathroy Larder (Mirado)	McElroy	89,719	10,231	0.114	1941-44,47,57,87
Centre Hill**	Munro	327,007	422	0.001	1967-70
Cheminis	McVittie	179,013	17,530	0.098	1991-96
Chesterville	McGarry	3,260,439	358,880	0.110	1930-52
Croesus	Munro	5,333	14,859	2.786	1915-18,23,31-36
Eastmaque (tailings)	Teck	1,051,744	28,740	0.027	1988-91
Ethel Copper**	James	17,477	115	0.007	1962-67
Gateford (Swastika)	Teck	103,684	30,068	0.290	1910-47***
Glimmer	Hislop	1,212,592	209,926	0.173	1997-2001
Golden Summit	Maisonville	737	57	0.077	1936-37,45
Gold Hill	Catharine	4,616	660	0.143	1927-28
Gold Pyramid	Guibord	175	36	0.206	1911
Hislop Mine (Hislop East)	Hislop	388,724	48,679	0.125	1990-91,93-95,99-2000
Holloway Mine*	Holloway	5,308,397	858,821	0.162	1993,95(preproduction),96-
Holt-McDermott	Holloway	8,178,999	1,322,332	0.162	1988-2004
Hudson-Rand	Teck	6,496	483	0.074	1922
Kerr	McGarry	40,336,512	10,457,441	0.259	1911,38-96
Kirkland Lake	Teck	3,140,283	1,172,955	0.374	1916-60
Kirkland Lake Gold*	Teck	294,206	89,729	0.305	2002-
Kirkland Townsite	Teck	4,230	1,921	0.454	1958-59
Laguerre	McVittie	40,514	7,568	0.187	1937-39
Lake Shore	Teck	17,208,323	8,602,791	0.500	1918-65,82-87,97-98
Macassa	Teck	7,877,532	3,525,389	0.448	1933-99
Macassa (Tailings)	Teck	3,240,890	173,659	0.054	1987-99,02
Matachewan Consolidated	Powell	3,631,908	385,503	0.106	1934-54,80-82
McBean	Gauthier	557,621	45,900	0.082	1984-86
Miller Independence	Pacaud	31	59	1.903	1918
Moffat-Hall	Lebel	16,388	4,780	0.292	1934-35
Morris Kirkland	Lebel	127,253	16,999	0.134	1936-38,40-42
New Telluride	Skead	104	62	0.596	1931-32
Newfield	Garrison	55,000	9,680	0.176	1996(bulk sample)

Mine	Township	Tons Milled	Production (oz. Au)	Grade (oz./T)	Years of Production
Omega	McVittie	1,615,081	214,098	0.133	1913,26-28,36-47
Queenston	Gauthier	1,054	177	0.168	1941
Ronda	Macmurchy	24,592	2,727	0.111	1939
Ross	Hislop	6,714,482	995,832	0.148	1936-89
Ryan Lake**	Powell	188,790	1,352	0.007	1948-57,62-64
Stairs	Midlothian	15,835	3,573	0.226	1965-66
Sylvanite	Teck	5,049,536	1,674,808	0.332	1927-61
Teck Hughes	Teck	9,565,302	3,709,007	0.388	1917-68
Toburn	Teck	1,186,316	570,659	0.481	1917-53***
Tyranite	Tyrrell	223,810	31,352	0.140	1939-42
Upper Beaver	Gauthier	580,562	140,709	0.242	1913-72***
Upper Canada	Gauthier	4,648,984	1,398,291	0.301	1938-71
White-Guyatt	Munro	50	10	0.200	1911
Wright Hargreaves	Teck	9,934,327	4,821,296	0.485	1921-65
Young Davidson	Powell	6,218,272	585,690	0.094	1934-57
Total including tailings		**144,134,451**	**41,873,136**	**0.291**	
Total excluding tailings		**139,841,817**	**41,670,737**	**0.298**	
Kirkland Lake Camp (West to East)					
Macassa	Teck	7,877,532	3,525,389	0.448	
Kirkland Lake	Teck	3,140,283	1,172,955	0.374	
Kirkland Lake Gold*	Teck	294,206	89,729	0.305	
Teck Hughes	Teck	9,565,302	3,709,007	0.388	
Lake Shore	Teck	17,208,323	8,602,791	0.500	
Wright Hargreaves	Teck	9,934,327	4,821,296	0.485	
Sylvanite	Teck	5,049,536	1,674,808	0.332	
Toburn	Teck	1,186,316	570,659	0.481	
Total		**54,255,825**	**24,166,634**	**0.445**	
Kirkland Lake Tailings					
Eastmaque (tailings)	Teck	1,051,744	28,740	0.027	
Macassa (tailings)	Teck	3,240,890	173,659	0.054	
Total		**4,292,634**	**202,399**	**0.047**	
Virginiatown Camp					
Chesterville	McGarry	3,260,439	358,880	0.110	
Kerr	McGarry	40,336,512	10,457,441	0.259	
Total		**43,596,951**	**10,816,321**	**0.248**	
Holloway Camp					
Holloway Mine*	Holloway	5,308,397	858,821	0.162	
Holt-McDermott	Holloway	8,178,999	1,322,332	0.162	
Total		**13,487,396**	**2,181,153**	**0.162**	

Mine	Township	Tons Milled	Production (oz. Au)	Grade (oz./T)	Years of Production
Hislop Camp					
Glimmer	Hislop	1,212,592	209,926	0.173	
Hislop Mine (Hislop East)	Hislop	388,724	48,679	0.125	
Ross	Hislop	6,714,482	995,832	0.148	
Total		**8,315,798**	**1,254,437**	**0.151**	
Matachewan Camp					
Matachewan Consolidated	Powell	3,631,908	385,503	0.106	
Young Davidson	Powell	6,218,272	585,690	0.094	
Total		**9,850,180**	**971,193**	**0.099**	
Shining Tree Camp					
Ronda	Macmurchy	24,592	2,727	0.111	
Tyrantte	Tyrrell	223,810	31352	0.140	
Total		**248,402**	**34,079**	**0.140**	

* Producer in 2005
** Base Metal Production
*** Intermittent Production

Table 10. Sampling of drill core at Kirkland Lake Drill Core Library and Remote Drill Core Storage Site to test for VMS potential.

Sample No.	KL DCL No.	Depth in feet	Company	Township	NAD 83 Zone 17 East	NAD 83 Zone 17 North	Description
05-GM-01	KL0254	122	Noranda Mines Ltd.	Bradette	596739	5480789	Mafic lapilli-agglomerate tuff with mafic and dacitic fragments in mafic matrix
05-GM-02	KL0255	377	Noranda Mines Ltd.	Bradette	601929	5480739	Felsic lapilli tuff - indistinct felsic lapilli fragments in strongly sericitized and chloritized matrix - schistocity at 70 degrees to core axis (CA)
05-GM-03	KL0411	166	Newmont Exploration of Canada Ltd.	Noseworthy	585859	5481739	Lapilli-agglomerate tuff - fragments siliceous and intermediate in composition in tuffaceous matrix intermediate in composition
05-GM-04	KL0414	106	Newmont Exploration of Canada Ltd.	Noseworthy	583819	5481039	Lapilli tuff - light grey siliceous fragments in a matrix of green chlorite, dark grey sericite and fine-grained quartz and ankerite
05-GM-05	KL1111	691	Newmont Exploration of Canada Ltd.	Bradette	605169	5485839	Greywacke / quartzite
05-GM-06	KL1111	896	Newmont Exploration of Canada Ltd.	Bradette	605169	5485839	Quartzite? Log suggests sericitized felsic quartz eye / lapilli tuff
05-GM-07	KL1112	140	Newmont Exploration of Canada Ltd.	Bradette	598229	5485689	Dacitic tuff with stretched lapilli intermediate in composition
05-GM-08	KL1112	337	Newmont Exploration of Canada Ltd.	Bradette	598229	5485689	Similar to above with more lapilli and more mafic matrix
05-GM-09	KL1115	202	Newmont Exploration of Canada Ltd.	Bradette	599639	5486209	Rhyodacite

Sample No.	KL DCT No.	Depth in feet	Company	Township	NAD 83 Zone 17 East	NAD 83 Zone 17 North	Description
05-GM-10	KL1116	276	Newmont Exploration of Canada Ltd.	Bradette	599669	5486589	Sericitized intermediate tuff with stretched out siliceous and felsic lapilli fragments
05-GM-11	KL1117	573	Newmont Exploration of Canada Ltd.	Bradette	602679	5485319	Sericitized rhyodacite tuff
05-GM-12	KL1117	606	Newmont Exploration of Canada Ltd.	Bradette	602679	5485319	Sericitized (minor carbonatized) felsic lapilli tuff with chlorite and possible chloritoid specks throughout
05-GM-13	KL1117	738	Newmont Exploration of Canada Ltd.	Bradette	602679	5485319	Sericiticed, carbonatized and chloritized felsic lapilli tuff
05-GM-14	KL1117	786	Newmont Exploration of Canada Ltd.	Bradette	602679	5485319	Sericitized, carbonatized and chloritized intermediate to felsic tuff
05-GM-15	KL1117	846	Newmont Exploration of Canada Ltd.	Bradette	602679	5485319	Sericitized, carbonatized and chloritized intermediate to felsic tuff with lapilli
05-GM-16	KL1113	155	Newmont Exploration of Canada Ltd.	Bradette	599009	5485829	Sericitized intermediate tuff with minor chlorite and some small stretched lapilli
05-GM-17	KL1113	198	Newmont Exploration of Canada Ltd.	Bradette	599009	5485829	Sericitized lapilli tuff (felsic fragments in more mafic matrix)
05-GM-18	KL1113	680	Newmont Exploration of Canada Ltd.	Bradette	599009	5485829	Sericitized, carbonatized and chloritized lapilli tuff - well banded due to stretched fragments and chlorite-rich material parallel to schistocity - near core with white specks
05-GM-19	KL1114	882	Newmont Exploration of Canada Ltd.	Bradette	598169	5485849	Sericitized rhyodacite tuff with small disseminated sulphide streaks and specks
05-GM-20	KL1114	936	Newmont Exploration of Canada Ltd.	Bradette	598169	5485849	Sericitized, carbonatized and chloritized rhyodacite tuff with small disseminated sulphide streaks and specks
05-GM-21	KL1114	305	Newmont Exploration of Canada Ltd.	Bradette	598169	5485849	Dacitic tuff with some stretched lapilli intermediate in composition
05-GM-22	KL2293	607	Goldbelt Mines Inc.	Moody	547719	5411399	Lapilli/agglomerate tuff - moderately stretched felsic fragments in strongly chloritized/sericitized mafic matrix

Table 11. Major oxide analyses of drill core from Kirkland Lake Drill Core Library and Remote Drill Core Storage Site.

Client ID	units	Al2O3 (Det Limit = 0_01)	CaO (Det Limit = 0_01)	Fe2O3 (Det Limit = 0_01)	K2O (Det Limit = 0_01)	LOI (Det Limit = 0_05)	MgO (Det Limit = 0_01)	MnO (Det Limit = 0_01)	Na2O (Det Limit = 0_01)	P2O5 (Det Limit = 0_01)	SiO2 (Det Limit = 0_01)	TiO2 (Det Limit = 0_01)	TOTAL
05-GM-01	wt%	15.45	5.92	6.95	1.47	9.63	2.46	0.10	1.56	0.16	55.50	0.80	99.97
05-GM-02	wt%	14.91	6.08	5.90	0.52	11.71	4.26	0.08	1.99	0.10	53.80	0.62	99.98
05-GM-03	wt%	15.41	5.04	8.12	0.89	2.57	1.67	0.12	2.92	0.22	62.00	1.00	99.98
05-GM-04	wt%	14.27	4.96	3.09	1.00	3.70	0.97	0.07	2.22	0.15	69.00	0.57	99.98
05-GM-05	wt%	15.35	3.04	3.09	1.29	5.51	0.71	0.03	4.25	0.08	66.30	0.35	99.98
05-GM-06	wt%	16.34	3.58	3.00	0.89	6.03	0.96	0.03	5.70	0.08	63.00	0.39	99.96
05-GM-07	wt%	14.11	2.36	2.77	2.27	3.21	0.71	0.04	2.54	0.13	71.30	0.54	99.96
05-GM-08	wt%	15.80	4.91	10.83	0.90	8.33	2.42	0.08	2.13	0.15	53.00	0.72	99.27
05-GM-09	wt%	14.26	3.76	2.60	1.52	4.17	0.60	0.05	3.08	0.13	69.20	0.62	99.98
05-GM-10	wt%	15.64	10.10	8.15	0.76	10.33	5.81	0.24	1.95	0.04	46.20	0.60	99.84
05-GM-11	wt%	17.40	2.21	1.48	1.44	3.75	0.44	0.02	5.65	0.10	67.10	0.37	99.97
05-GM-12	wt%	15.09	3.03	4.58	1.19	5.53	0.49	0.04	4.25	0.09	65.30	0.37	99.99
05-GM-13	wt%	13.04	5.80	9.80	1.64	8.52	1.52	0.14	3.31	0.27	53.30	0.91	98.28
05-GM-14	wt%	17.03	4.57	2.68	1.43	7.98	1.74	0.03	4.70	0.13	59.20	0.48	99.96
05-GM-15	wt%	14.94	7.68	3.66	2.05	12.73	3.52	0.12	3.78	0.10	51.00	0.39	99.96
05-GM-16	wt%	14.24	2.77	2.54	2.29	2.77	1.19	0.03	1.73	0.14	71.70	0.53	99.94
05-GM-17	wt%	16.53	3.64	2.32	2.17	2.52	0.84	0.03	2.76	0.17	68.30	0.67	99.95
05-GM-18	wt%	15.06	3.30	5.18	1.66	6.20	1.79	0.12	2.00	0.16	63.80	0.74	99.97
05-GM-19	wt%	16.94	5.13	3.99	1.77	4.61	1.77	0.07	2.95	0.17	61.80	0.79	99.98
05-GM-20	wt%	19.21	5.71	5.19	3.47	4.85	1.09	0.08	1.75	0.20	56.70	0.92	99.20
05-GM-21	wt%	16.49	6.14	5.64	1.11	5.70	1.46	0.09	2.57	0.20	59.70	0.82	99.96
05-GM-22	wt%	12.36	5.55	16.44	0.36	11.03	4.72	0.30	1.28	0.10	46.70	1.17	99.97

Metric Conversion Table

Conversion from SI to Imperial			Conversion from Imperial to SI		
SI Unit	*Multiplied by*	*Gives*	*Imperial Unit*	*Multiplied by*	*Gives*
		LENGTH			
1 mm	0.039 37	inches	1 inch	**25.4**	mm
1 cm	0.393 70	inches	1 inch	**2.54**	cm
1 m	3.280 84	feet	1 foot	**0.304 8**	m
1 m	0.049 709	chains	1 chain	20.116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	**1.609 344**	km
		AREA			
1 cm^2	0.155 0	square inches	1 square inch	**6.451 6**	cm^2
1 m^2	10.763 9	square feet	1 square foot	**0.092 903 04**	m^2
1 km^2	0.386 10	square miles	1 square mile	2.589 988	km^2
1 ha	2.471 054	acres	1 acre	0.404 685 6	ha
		VOLUME			
1 cm^3	0.061 023	cubic inches	1 cubic inch	**16.387 064**	cm^3
1 m^3	35.314 7	cubic feet	1 cubic foot	0.028 316 85	m^3
1 m^3	1.307 951	cubic yards	1 cubic yard	0.764 554 86	m^3
		CAPACITY			
1 L	1.759 755	pints	1 pint	0.568 261	L
1 L	0.879 877	quarts	1 quart	1.136 522	L
1 L	0.219 969	gallons	1 gallon	**4.546 090**	L
		MASS			
1 g	0.035 273 962	ounces (avdp)	1 ounce (avdp)	28.349 523	g
1 g	0.032 150 747	ounces (troy)	1 ounce (troy)	**31.103 476 8**	g
1 kg	2.204 622 6	pounds (avdp)	1 pound (avdp)	**0.453 592 37**	kg
1 kg	0.001 102 3	tons (short)	1 ton (short)	**907.184 74**	kg
1 t	1.102 311 3	tons (short)	1 ton (short)	**0.907 184 74**	t
1 kg	0.000 984 21	tons (long)	1 ton (long)	**1016.046 908 8**	kg
1 t	0.984 206 5	tons (long)	1 ton (long)	**1.016 046 90**	t
		CONCENTRATION			
1 g/t	0.029 166 6	ounce (troy)/ ton (short)	1 ounce (troy)/ ton (short)	34.285 714 2	g/t
1 g/t	0.583 333 33	pennyweights/ ton (short)	1 pennyweight/ ton (short)	1.714 285 7	g/t

OTHER USEFUL CONVERSION FACTORS

	Multiplied by	
1 ounce (troy) per ton (short)	31.103 477	grams per ton (short)
1 gram per ton (short)	0.032 151	ounces (troy) per ton (short)
1 ounce (troy) per ton (short)	20.0	pennyweights per ton (short)
1 pennyweight per ton (short)	0.05	ounces (troy) per ton (short)

Note: Conversion factors which are in bold type are exact. The conversion factors have been taken from or have been derived from factors given in the Metric Practice Guide for the Canadian Mining and Metallurgical Industries, published by the Mining Association of Canada in co-operation with the Coal Association of Canada.

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